

SHARP SERVICE MANUAL

SERVICE-ANLEITUNG

S72N3PG-M20XU



DIGITAL MULTIMEDIA PROJECTOR
DIGITALER MULTIMEDIA PROJEKTOR

PG-M20S
PG-M20X

MODELS
MODELLE **AN-60KT**

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

Im Interesse der Benutzersicherheit (erforderliche Sicherheitsregeln in einigen Ländern) muß das Gerät in seinen Originalzustand gebracht werden. Außerdem dürfen für die spezifizierten Bauteile nur identische Teile verwendet werden.

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SHARP CORPORATION

This document has been published to be used for
after sales service only.
The contents are subject to change without notice.

Specifications

Product type	Digital Multimedia Projector
Model	PG-M20X/PG-M20S
Video system	NTSC 3.58/NTSC 4.43/PAL/PAL-M/PAL-N/PAL 60/SECAM/ DTV480I/DTV480P/DTV720P/DTV1080I
Display method	Single Chip Digital Micromirror Device™ (DMD™) by Texas Instruments
DMD panel	Panel size: 0.7" (17.8 mm), 1 chip XGA DMD(PG-M20X)/0.55"(14.0mm)",1 chip SVGA DMD(PG-M20S) No. of dots: 786,432 dots (1,024 [H] × 768 [V])(PG-M20X)/480,000 dots (800[H] × 600[V])(PG-M20S)
Lens	1–1.2 × zoom lens, F1.75–2.04, f = 28.0–33.5 mm
Projection lamp	High Intensity Discharge Lamp (HID Lamp), DC 210 W
Component input signal	29-pin connector
(INPUT1)	DVI input signal: Digital 250–1,000 mV 50 Ω Analog 0.7 Vp-p 75 Ω Y: 1.0 Vp-p, sync negative, 75 Ω terminated P _B : 0.7 Vp-p, 75 Ω terminated P _R : 0.7 Vp-p, 75 Ω terminated
Horizontal resolution	700 TV lines (DTV720P)(PG-M20X)/500TV Lines (S-Video[NTSC3.58])(PG-M20S)
Computer RGB input signal	29-pin connector
(INPUT 1)	RGB separate/sync on green type analog input: 0–0.7 Vp-p, positive, 75 Ω terminated HORIZONTAL SYNC. SIGNAL: TTL level (positive/negative) VERTICAL SYNC. SIGNAL: Same as above
S-video input signal	4-pin Mini DIN connector
(INPUT 2)	Y (luminance signal): 1.0 Vp-p, sync negative, 75 Ω terminated C (chrominance signal): Burst 0.286 Vp-p, 75 Ω terminated
Video input signal	RCA connector: VIDEO, composite video, 1.0 Vp-p, sync negative, 75 Ω
(INPUT 3)	terminated
Pixel clock	12–230 MHz(PG-20X)/12–120MHz(PG-M20S)
Vertical frequency	43–100 Hz
Horizontal frequency	15–126 kHz(PG-20X)/15–102kHz(PG-M20S)
Audio input signal	Ø3.5 mm MINIJACK: AUDIO, 0.5 Vrms, more than 47 kΩ (stereo)
Audio output	2.0 W (monaural)
Speaker system	4 cm × 3 cm
Rated voltage	AC 100–240 V
Input current	3.2 A
Rated frequency	50/60 Hz
Power consumption	290 W
Power dissipation	<1,090 BTU/hour
Operating temperature	41°F to 95°F (+5°C to +35°C)
Storage temperature	-4°F to 140°F (-20°C to +60°C)
Cabinet	Plastic
I/R carrier frequency	38 kHz
Dimensions (approx.)	8 5/8" × 3" × 11 15/16" (219 (W) × 76 (H) × 303 (D) mm) (main body only) 8 3/4" × 3 1/4" × 12 1/2" (223 (W) × 83 (H) × 318 (D) mm) (including adjustment feet and projecting parts)
Weight (approx.)	5.8 lbs. (2.6 kg)
Supplied accessories	Remote control, Two R-03 batteries, Power cord for U.S., Canada etc. (6', 1.8 m), Power cord for Europe, except U.K. (6', 1.8 m), Power cord for U.K., Hong Kong and Singapore (6', 1.8 m), Power cord for Australia, New Zealand and Oceania (6', 1.8 m), DVI to 15-pin D-sub cable (6', 1.8 m), USB cable (6', 1.8 m), Carrying case, Lens cap (attached), Lens cap strap, Terminal cover (attached), CD-ROM, Operation manual, Quick reference guides
Replacement parts	Lamp unit (Lamp/cage module) (BQC-PGM20X//1), Remote control (RRMCGA013WJSA), Two R-03 batteries ("AAA" size, UM/SUM-4, HP-16, or similar), Power cord for U.S., Canada etc. (QACCDAA007WJPZ), Power cord for Europe, except U.K. (QACCV4002CEZZ), Power cord for U.K., Hong Kong and Singapore (QACCB5024CENA[PG-M20X]/QACCBBA012WJPZ [PG-M20S]), New Power cord for Australia, Zealand and Oceania(QACCL3022CEZZ), DVI to 15-pin D-sub cable (QCNWGA010WJZZ), USB cable (QCNWG0001WJPZ), Carrying case (GCASN0005CESA), Lens cap (CCAPHA001WJ01), Lens cap strap (UBNDT0013CEZZ), Terminal cover (GCOVD0103CESA), CD-ROM (UDSKA0058CEN1 [PG-M20X]/UDSKAA009WJZZ[PG-M20S]), Operation manual (TINS-7609CEZZ[PG-M20X]/TINS-A209WJZZ[PG-M20S]), Quick reference guides

This SHARP projector uses a DMD panel. This very sophisticated panel contains 786,432(PG-M20X)/480,000(PG-M20S) pixels. As with any high technology electronic equipment such as large screen TVs, video systems and video cameras, there are certain acceptable tolerances that the equipment must conform to.

This unit has some inactive pixels within acceptable tolerances which may result in inactive dots on the picture screen. This will not affect the picture quality or the life expectancy of the unit.

Specifications are subject to change without notice.

IMPORTANT SERVICE SAFETY NOTES (for USA)

■ Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and servicing guidelines as follows:

WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.

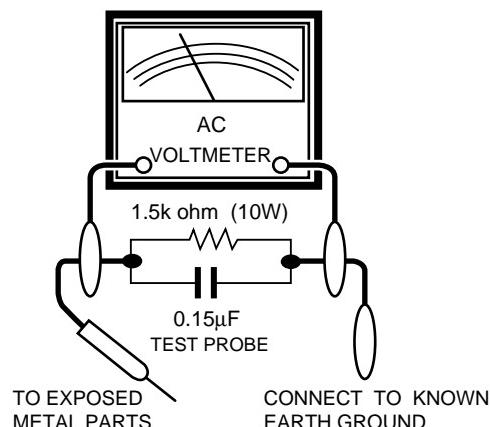
BEFORE RETURNING THE PROJECTOR: (Fire & Shock Hazard)

Before returning the projector to the user, perform the following safety checks:

1. Inspect lead wires are not pinched between the chassis and other metal parts of the projector.
2. Inspect all protective devices such as non-metallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc.
3. To be sure that no shock hazard exists, check for current leakage in the following manner:
 - Plug the AC cord directly into a 120-volt AC outlet, (Do not use an isolation transformer for this test).
 - Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15µF capacitor in parallel between all exposed metal cabinet parts and earth ground.

- Use an AC voltmeter with sensitivity of 5000 ohm per volt., or higher, sensitivity to measure the AC voltage drop across the resistor (See Diagram).
- All checks must be repeated with the AC plug connection reversed. (If necessary, a non-polarized adapter plug must be used only for the purpose of completing these checks.)

Any reading of 0.3 volts RMS (this corresponds to 0.2 milliamp. AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the unit to the owner.



SAFETY NOTICE

Many electrical and mechanical parts in Projector have special safety-related characteristics.

These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc.

Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "▲" and shaded areas in the Replacement Parts Lists and Schematic Diagrams. For continued protection, replacement parts must be identical to those used in the original circuit. The use of a substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire or other hazards.

WARNING: The bimetallic component has the primary conductive side exposed. Be very careful in handling this component when the power is on.

AVIS POUR LA SECURITE

De nombreuses pièces, électriques et mécaniques, dans le projecteur à présentent des caractéristiques spéciales relatives à la sécurité, qui ne sont souvent pas évidentes à vue.

Le degré de protection ne peut pas être nécessairement augmentée en utilisant des pièces de remplacement étalonnées pour haute tension, puissance, etc.

Les pièces de remplacement qui présentent ces caractéristiques sont identifiées dans ce manuel; les pièces électriques qui présentent ces particularités sont identifiées par la marque "▲" et hachurées dans la liste des pièces de remplacement et les diagrammes schématiques. Pour assurer la protection, ces pièces doivent être identiques à celles utilisées dans le circuit d'origine. L'utilisation de pièces qui n'ont pas les mêmes caractéristiques que les pièces recommandées par l'usine, indiquées dans ce manuel, peut provoquer des électrocutions, incendies ou autres accidents.

AVERTISSEMENT: La composante bimétallique dispose du conducteur primaire dénudé. Faire attention lors de la manipulation de cette composante sous tension.

NOTE TO SERVICE PERSONNEL

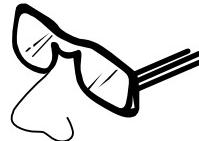
UV-RADIATION PRECAUTION

The light source, metal halide lamp, in the projector emits small amounts of UV-Radiation.

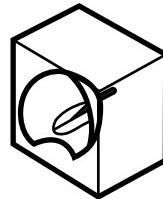
AVOID DIRECT EYE AND SKIN EXPOSURE.

To ensure safety please adhere to the following:

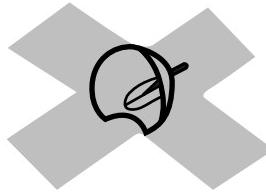
1. Be sure to wear sun-glasses when servicing the projector with the lamp turned "on" and the top enclosure removed.



2. Do not operate the lamp outside of the lamp housing.



3. Do not operate for more than 2 hours with the enclosure removed.



UV-Radiation and Medium Pressure Lamp Precautions

1. Be sure to disconnect the AC plug when replacing the lamp.
2. Allow one hour for the unit to cool down before servicing.
3. Replace only with same type lamp. Type BQC-PGM20X//1 rated 85V/210W.
4. The lamp emits small amounts of UV-Radiation, avoid direct-eye contact.
5. The medium pressure lamp involves a risk of explosion. Be sure to follow installation instructions described below and handle the lamp with care.

NOTE POUR LE PERSONNEL D'ENTRETIEN

PRECAUTION POUR LES RADIATIONS UV

La source de lumière, la lampe métal halide, dans le projecteur émet de petites quantités de radiation UV.

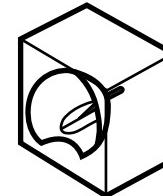
EVITEZ TOUTE EXPOSITION DIRECTE DES YEUX ET DE LA PEAU.

Pour votre sécurité, nous vous prions de respecter les points suivants:

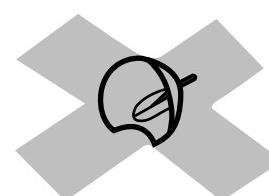
1. Toujours porter des lunettes de soleil lors d'un entretien du projecteur avec la lampe allumée et le haut du coffret retiré.



2. Ne pas faire fonctionner la lampe à l'extérieur du boîtier de lampe.



3. Ne pas faire fonctionner plus de 2 heures avec le coffret retiré.



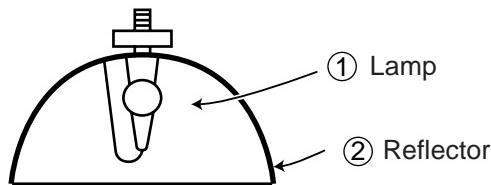
Précautions pour les radiations UV et la lampe moyenne pression

1. Toujours débrancher la fiche AC lors du remplacement de la lampe.
2. Laisser l'unité refroidir pendant une heure avant de procéder à l'entretien.
3. Ne remplacer qu'avec une lampe du même type. Type BQC-PGM20X//1 caractéristique 85V/210W.
4. La lampe émet de petites quantités de radiation UV éviter tout contact direct avec les yeux.
5. La lampe moyenne pression implique un risque d'explosion. Toujours suivre les instructions d'installation décrites ci-dessous et manipuler la lampe avec soin.

UV-RADIATION PRECAUTION (Continued)**■ Lamp Replacement****Note:**

Since the lamp reaches a very high temperature during units operation replacement of the lamp should be done at least one hour after the power has been turned off. (to allow the lamp to cool off.) Installing the new lamp, make sure not to touch the lamp (bulb) replace the lamp by holding its reflector ②.

[Use original replacement only.]



DANGER ! — Never turn the power on without the lamp to avoid electric-shock or damage of the devices since the stabilizer generates high voltages at its start.

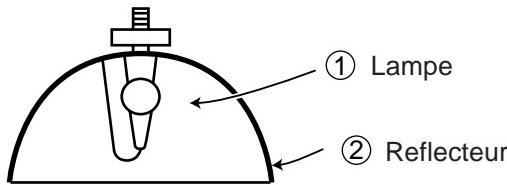
Since small amounts of UV-Radiation are emitted from an opening between the duct cover and the lamp housing, it is recommended to place the LENS CAP on the opening during servicing to avoid eye and skin exposure.

Note: Please obtain a lens cap before servicing a models PG-M20X/PG-M20S that is received without one.

PRECAUTION POUR LES RADIATIONS UV (Suite)**■ Remplacement de la lampe****Remarque:**

Comme la lampe devient très chaude pendant le fonctionnement de l'unité, son remplacement ne doit être effectué au moins une heure après avoir coupé l'alimentation (pour permettre à la lampe de refroidir). En installant la nouvelle lampe, s'assurer de ne pas toucher la lampe (ampoule). Remplacer la lampe en tenant son réflecteur ②.

[N'utiliser qu'un remplacement d'origine.]



DANGER ! — Ne jamais mettre sous tension sans la lampe pour éviter un choc électrique ou des dommages des appareils car le stabilisateur génère de hautes tensions à sa mise en route.

Comme de petites quantités de radiation UV sont émises par une ouverture entre le couvercle du conduit et le boîtier de la lampe, il est recommandé de placer le CAPUCHON D'OPTIQUE sur l'ouverture pendant l'entretien pour éviter une exposition des yeux et la peau.

Remarque: Prié de se procurer un capuchon d'optique acant d'entretien un modèle PG-M20X/PG-M20S qui est livré sans.

WARNING: High brightness light source, do not stare into the beam of light, or view directly. Be especially careful that children do not stare directly in to the beam of light.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS UNIT TO MOISTURE OR WET LOCATIONS.

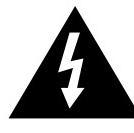


CAUTION

RISK OF ELECTRIC SHOCK.
DO NOT REMOVE SCREWS
EXCEPT SPECIFIED USER
SERVICE SCREWS



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE CABINET.
NO USER-SERVICEABLE PARTS EXCEPT LAMP UNIT.
REFER SERVICING TO QUALIFIED SERVICE
PERSONNEL.



The lightning flash with arrowhead within a triangle is intended to tell the user that parts inside the product are risk of electric shock to persons.



The exclamation point within a triangle is intended to tell the user that important operating and servicing instructions are in the manual with the projector.

AVERTISSEMENT: Source lumineuse de grande intensité. Ne pas fixer le faisceau lumineux ou le regarder directement. Veiller particulièrement à éviter que les enfants ne fixent directement le faisceau lumineux.

AVERTISSEMENT: AFIN D'EVITER TOUT RISQUE D'INCENDIE OU D'ELECTROCUTION, NE PAS PLACER CET APPAREIL DANS UN ENDROIT HUMIDE OU MOUILLE.

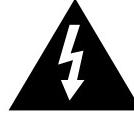


ATTENTION

RISQUE
D'ELECTROCUTION NE
PAS RETIRER LES VIS, A
L'EXCEPTION DES VIS DE
REPARATION UTILISATEUR
SPECIFIEES



ATTENTION: POUR EVITER TOUT RISQUE
D'ELECTROCUTION, NE PAS RETIRER LE CAPOT.
AUCUNE DES PIECES INTERIEURES N'EST REPARABLE
PAR L'UTILISATEUR, A L'EXCEPTION DE L'UNITE DE
LAMPE. POUR TOUTE REPARATION, S'ADRESSER A UN
TECHNICIEN D'ENTRETIEN QUALIFIE.



L'éclair terminé d'une flèche à l'intérieur d'un triangle indique à l'utilisateur que les pièces se trouvant dans l'appareil sont susceptibles de provoquer une décharge électrique.



Le point d'exclamation à l'intérieur d'un triangle indique à l'utilisateur que les instructions de fonctionnement et d'entretien sont détaillées dans les documents fournis avec le projecteur.

Precautions for using lead-free solder

1 Employing lead-free solder

"Input and key PWBs" of this model employs lead-free solder. The LF symbol indicates lead-free solder, and is attached on the PWBs and service manuals. The alphabetical character following LF shows the type of lead-free solder.

Example:

L F a

Sn-Ag-Cu

Indicates lead-free solder of tin, silver and copper.

2 Using lead-free wire solder

When fixing the PWB soldered with the lead-free solder, apply lead-free wire solder. Repairing with conventional lead wire solder may cause damage or accident due to cracks.

As the melting point of lead-free solder (Sn-Ag-Cu) is higher than the lead wire solder by 40°C, we recommend you to use a dedicated soldering bit, if you are not familiar with how to obtain lead-free wire solder or soldering bit, contact our service station or service ranch in your area.

3 Soldering

As the melting point of lead-free solder (Sn-Ag-Cu) is about 220°C which is higher than the conventional lead solder by 40°C, and as it has poor solder wettability, you may be apt to keep the soldering bit in contact with the PWB for extended period of time. However, Since the land may be peeled off or the maximum heat-resistance temperature of parts may be exceeded, remove the bit from the PWB as soon as you confirm the steady soldering condition.

Lead-free solder contains more tin, and the end of the soldering bit may be easily corroded. Make sure to turn on and off the power of the bit as required.

If a different type of solder stays on the tip of the soldering bit, it is alloyed with lead-free solder. Clean the bit after every use of it.

When the tip of the soldering bit is blackened during use, file it with steel wool or fine sandpaper.

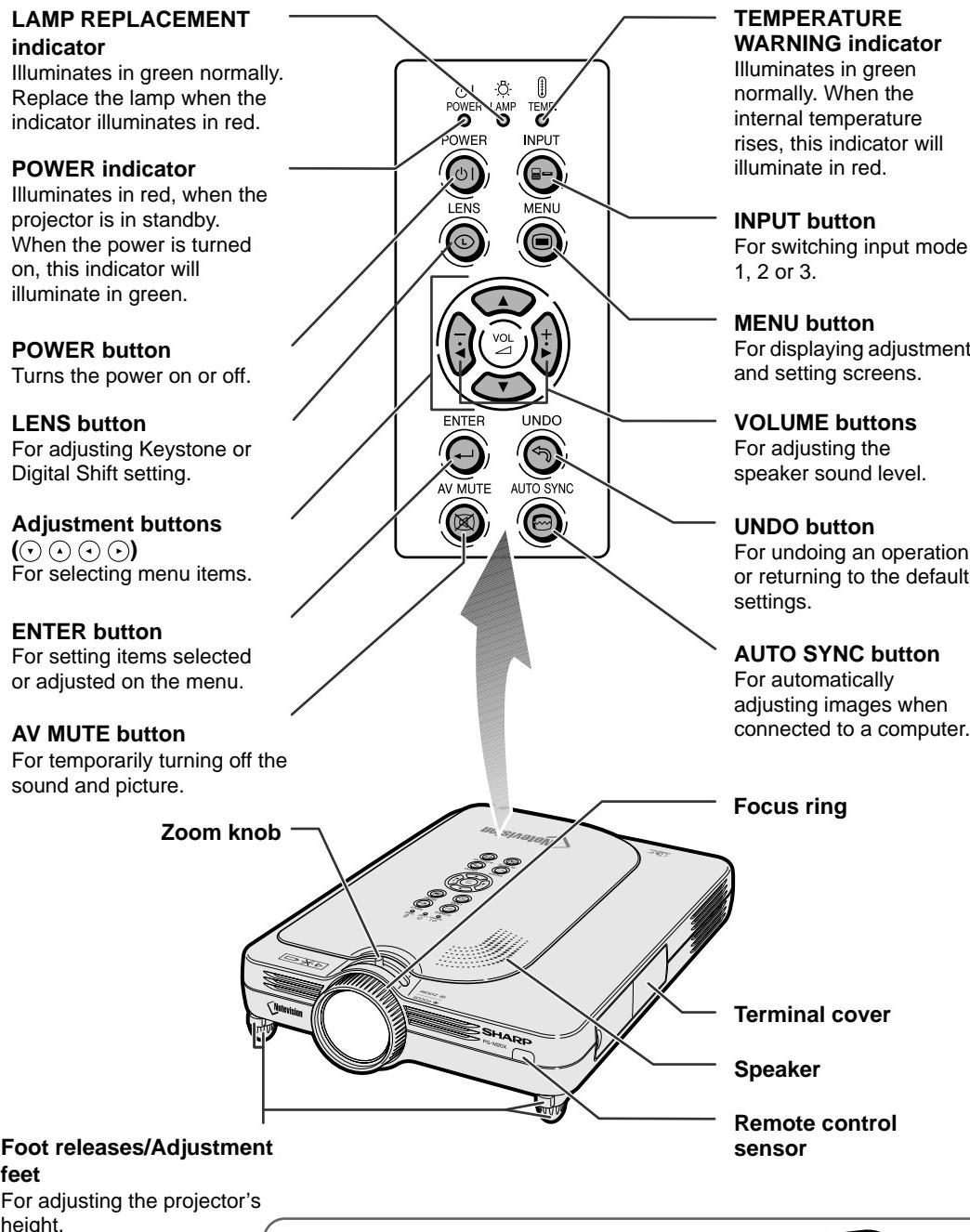
Becareful when replacing parts with polarity indication on the PWB silk.

Lead-free wire solder for servicing

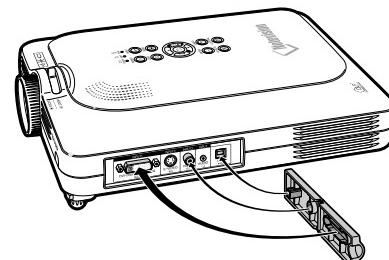
Part No.	★	Description	Code
ZHNDAi123250E	J	φ0.3mm 250g(1roll)	BL
ZHNDAi126500E	J	φ0.6mm 500g(1roll)	BK
ZHNDAi12801KE	J	φ1.0mm 1kg(1roll)	BM

Location of Controls

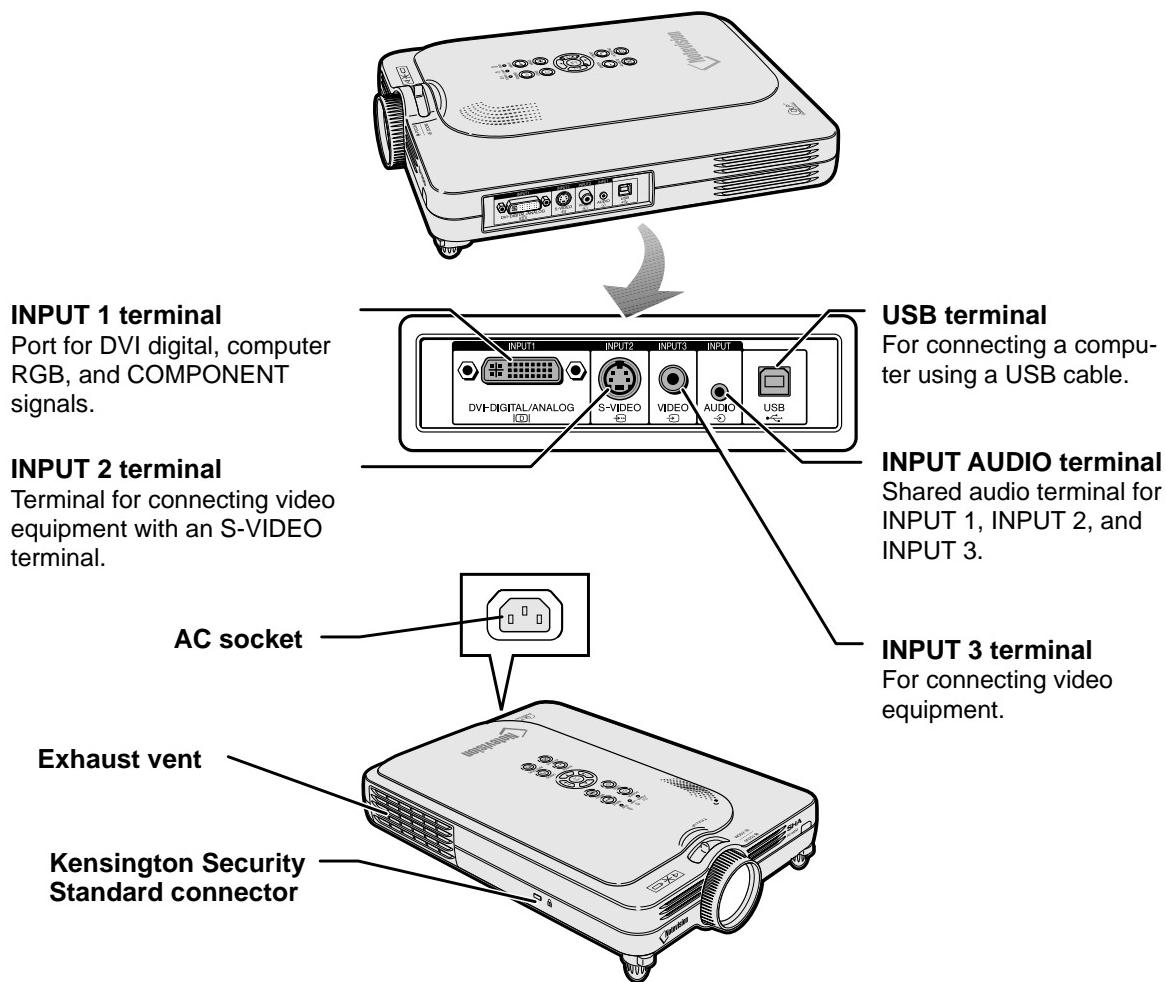
Projector (Front and Top View)



Attaching the terminal cover
Attach the terminal cover by placing it on the side panel of the projector and pressing it into place, as shown in the illustration.



Projector (Side View)

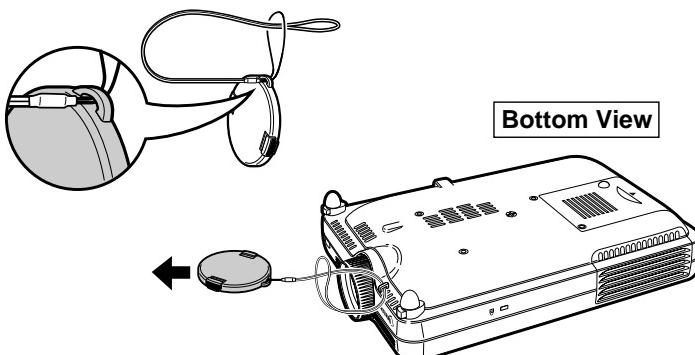


Using the Kensington Lock

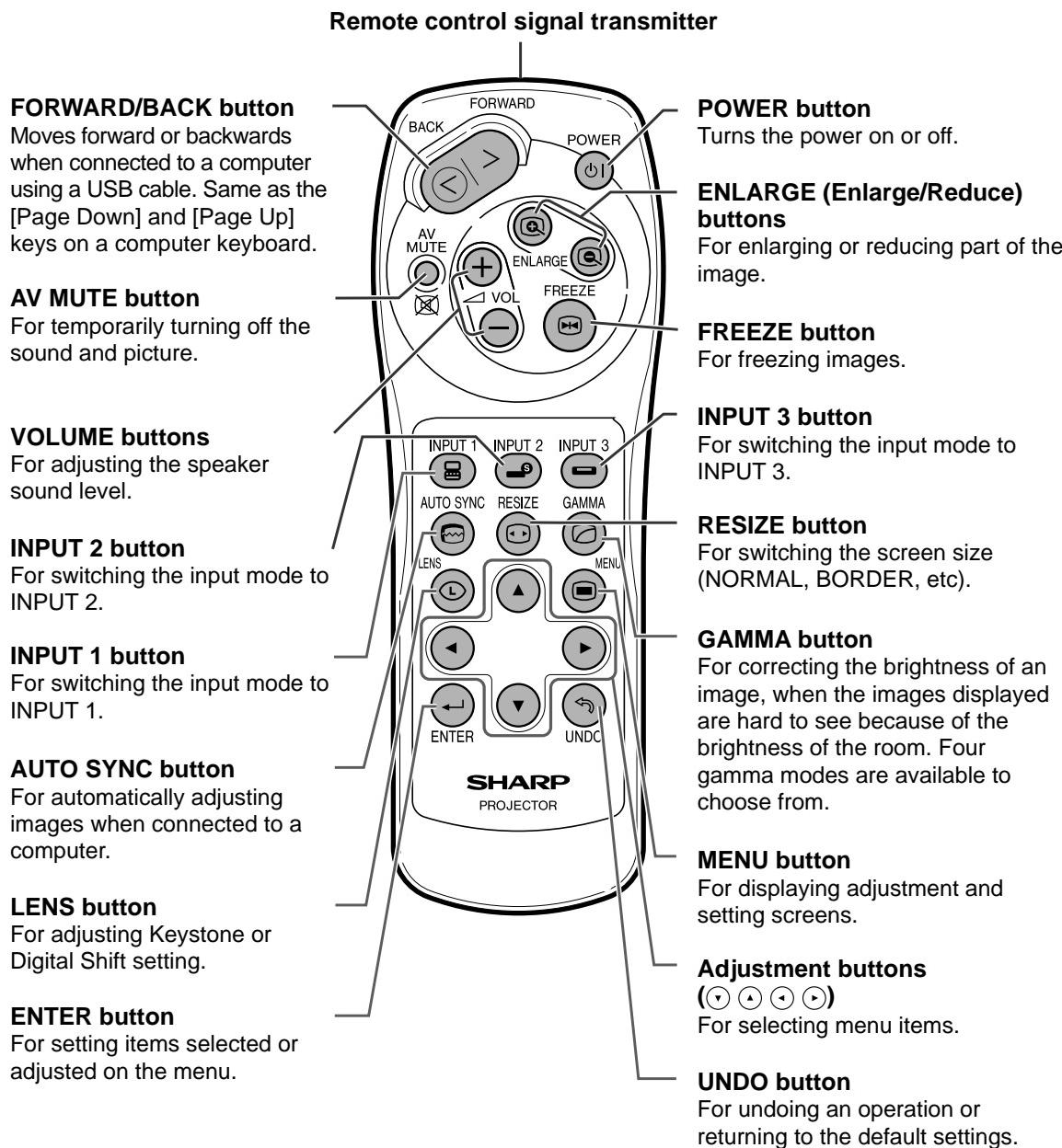
- This projector has a Kensington Security Standard connector for use with a Kensington MicroSaver Security System. Refer to the information that came with the system for instructions on how to use it to secure the projector.

Attaching the lens cap

After putting the lens cap strap on the lens cap, pass the other end of the strap through the hole under the projector, next to the lens, as shown in the illustration.

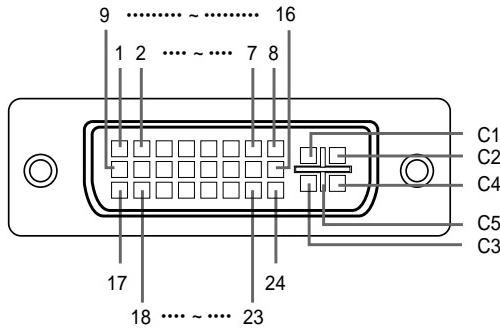


Remote Control



Connection Pin Assignments

DVI Digital / Analog INPUT 1 port : 29 pin connector



• DVI Digital INPUT

Pin No.	Signal	Pin No.	Signal
1	T.M.D.S data 2-	16	Hot plug detection
2	T.M.D.S data 2+	17	T.M.D.S data 0-
3	T.M.D.S data 2 shield	18	T.M.D.S data 0+
4	Not connected	19	T.M.D.S data 0 shield
5	Not connected	20	Not connected
6	DDC clock	21	Not connected
7	DDC data	22	T.M.D.S clock shield
8	Not connected	23	T.M.D.S clock+
9	T.M.D.S data 1-	24	T.M.D.S clock-
10	T.M.D.S data 1+	C1	Not connected
11	T.M.D.S data 1 shield	C2	Not connected
12	Not connected	C3	Not connected
13	Not connected	C4	Not connected
14	+5V current	C5	Ground
15	Ground		

• DVI Analog RGB Input

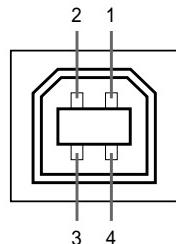
Pin No.	Signal	Pin No.	Signal
1	Not connected	16	Hot plug detection
2	Not connected	17	Not connected
3	Not connected	18	Not connected
4	Not connected	19	Not connected
5	Not connected	20	Not connected
6	DDC clock	21	Not connected
7	DDC data	22	Not connected
8	Vertical sync	23	Not connected
9	Not connected	24	Not connected
10	Not connected	C1	Analog input Red
11	Not connected	C2	Analog input Green
12	Not connected	C3	Analog input Blue
13	Not connected	C4	Horizontal sync
14	+5V current	C5	Ground
15	Ground		

• DVI Analog Component Input

Pin No.	Signal	Pin No.	Signal
1	Not connected	16	Not connected
2	Not connected	17	Not connected
3	Not connected	18	Not connected
4	Not connected	19	Not connected
5	Not connected	20	Not connected
6	Not connected	21	Not connected
7	Not connected	22	Not connected
8	Not connected	23	Not connected
9	Not connected	24	Not connected
10	Not connected	C1	Analog input Pr/Cr
11	Not connected	C2	Analog input Y
12	Not connected	C3	Analog input Pb/Cb
13	Not connected	C4	Not connected
14	Not connected	C5	Ground
15	Ground		

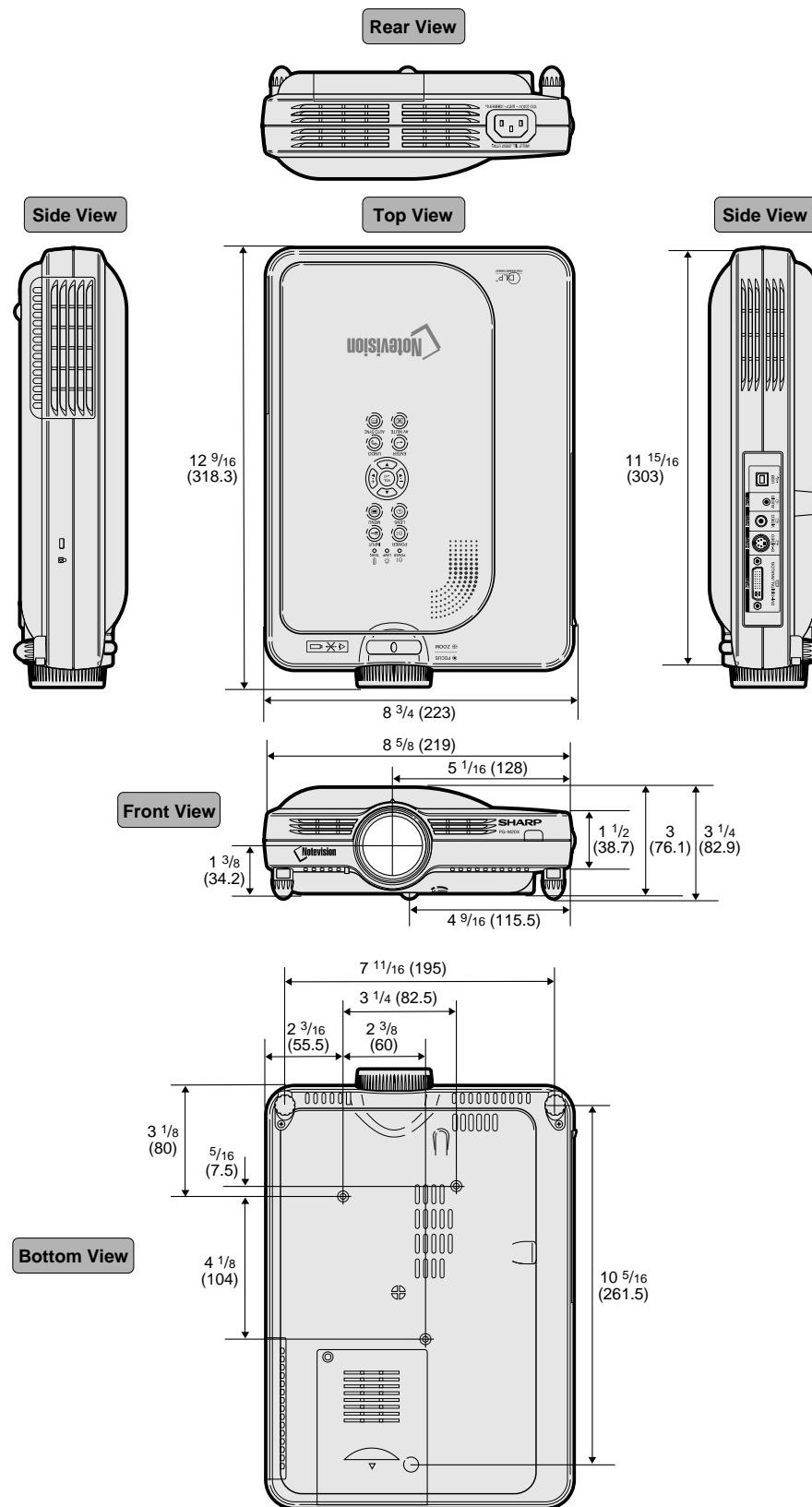
4-pin USB connector

• USB connector: 4 pin B-type USB connector



Pin no.	Signal	Name
1	VCC	USB current
2	USB-	USB data-
3	USB+	USB data+
4	SG	Signal Ground

Dimensions



Units: inches (mm)

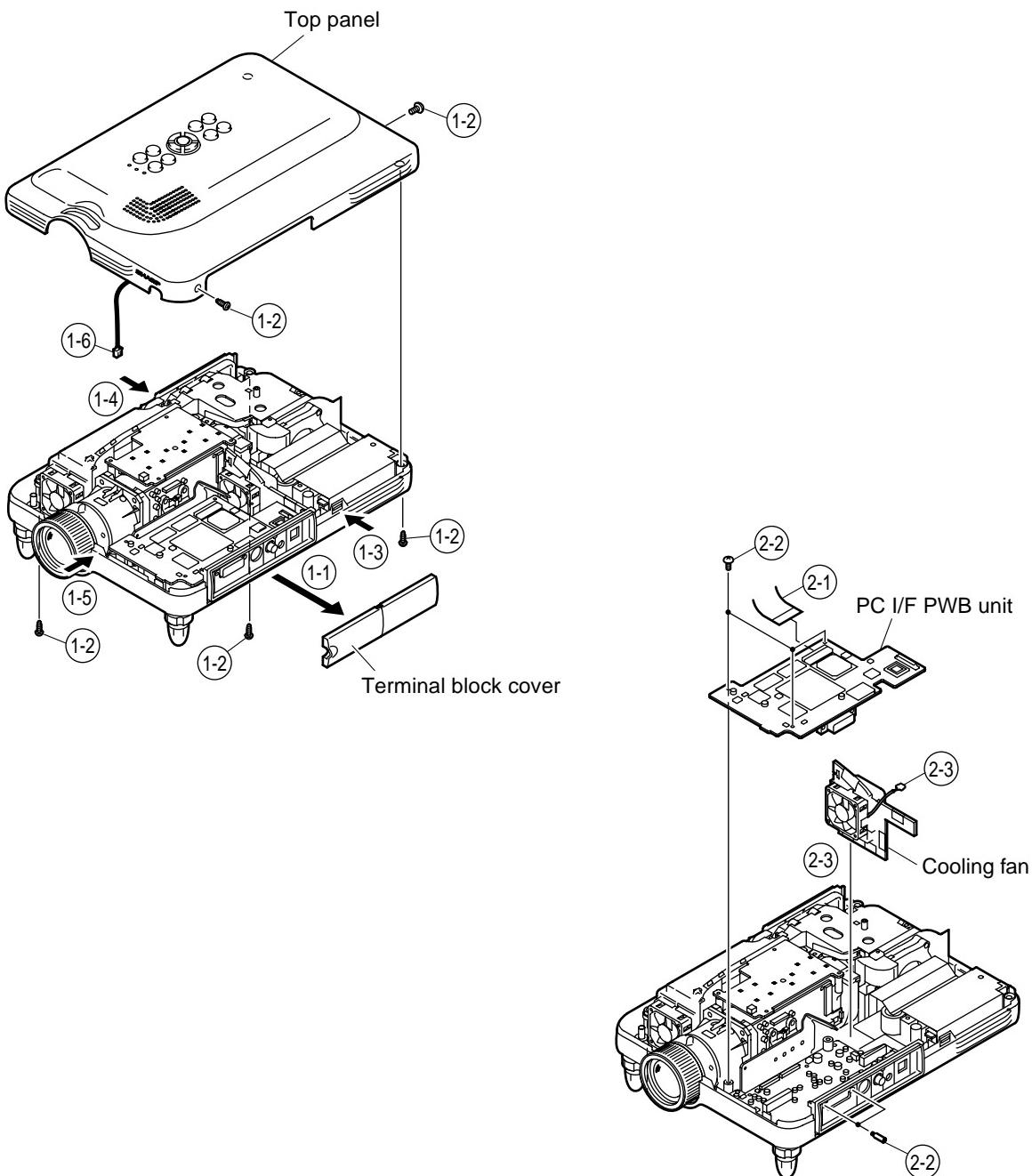
REMOVING OF MAJOR PARTS

1. Removing the top panel

- 1-1. Detach the terminal block cover.
- 1-2. Remove the five lock screws from the top panel.
- 1-3. Press the right side of the bottom body to undo the hook.
- 1-4. Press the left side of the bottom body to undo the hook.
- 1-5. Press the front of the bottom body to undo the hook. Get the top panel loose from the bottom body.
- 1-6. Slightly raise the front of the top panel and disconnect the speaker connector.

2. Removing the PC I/F PWB and cooling fan

- 2-1. Disconnect the connector.
- 2-2. Remove the three lock screws from the PC I/F PWB and then the two hex support screws.
- 2-3. Disconnect the connector and take out the cooling fan.

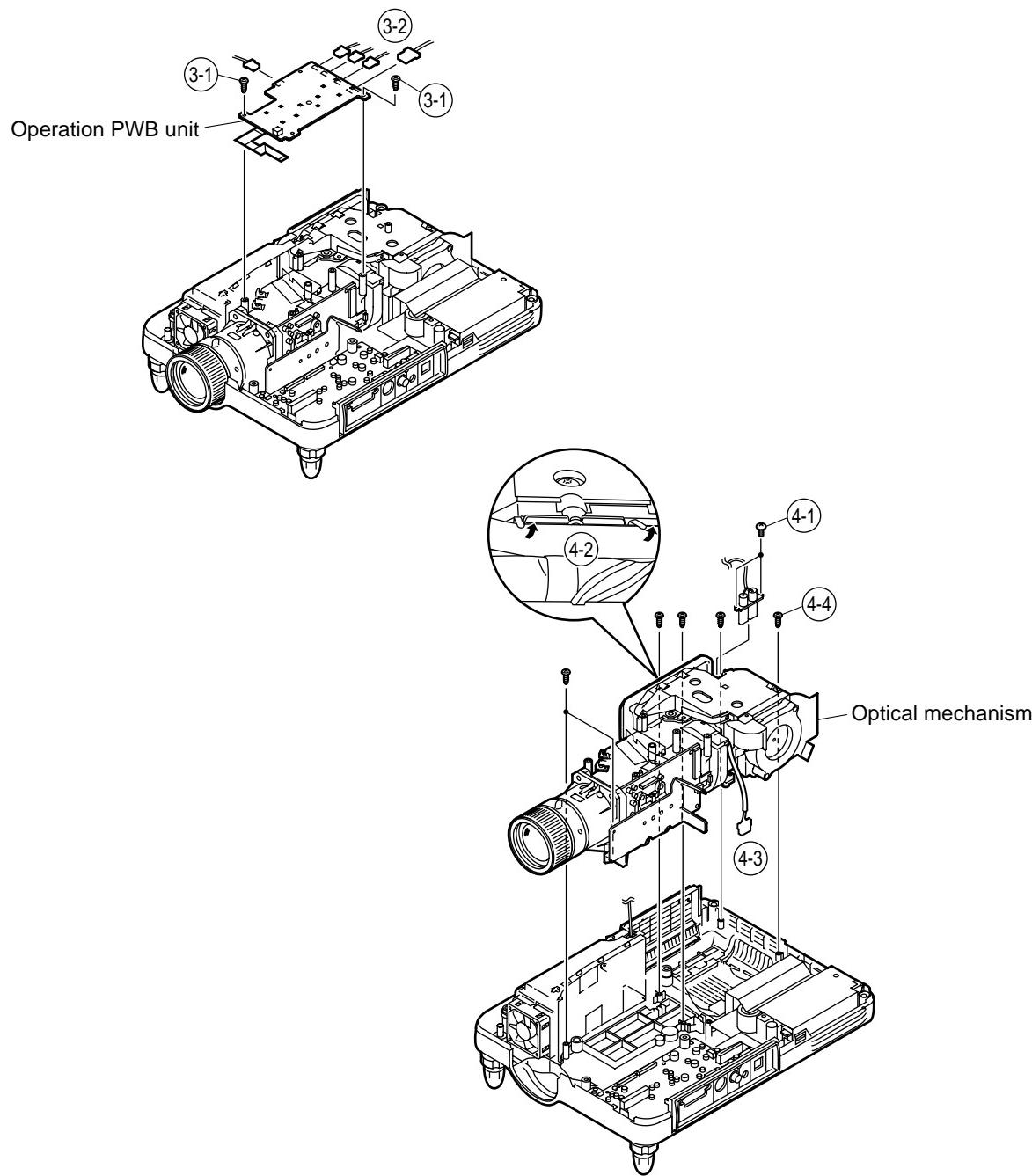


3. Removing the operation PWB

- 3-1. Remove the two lock screws from the operation PWB and slightly raise this PWB.
- 3-2. Disconnect the connectors.

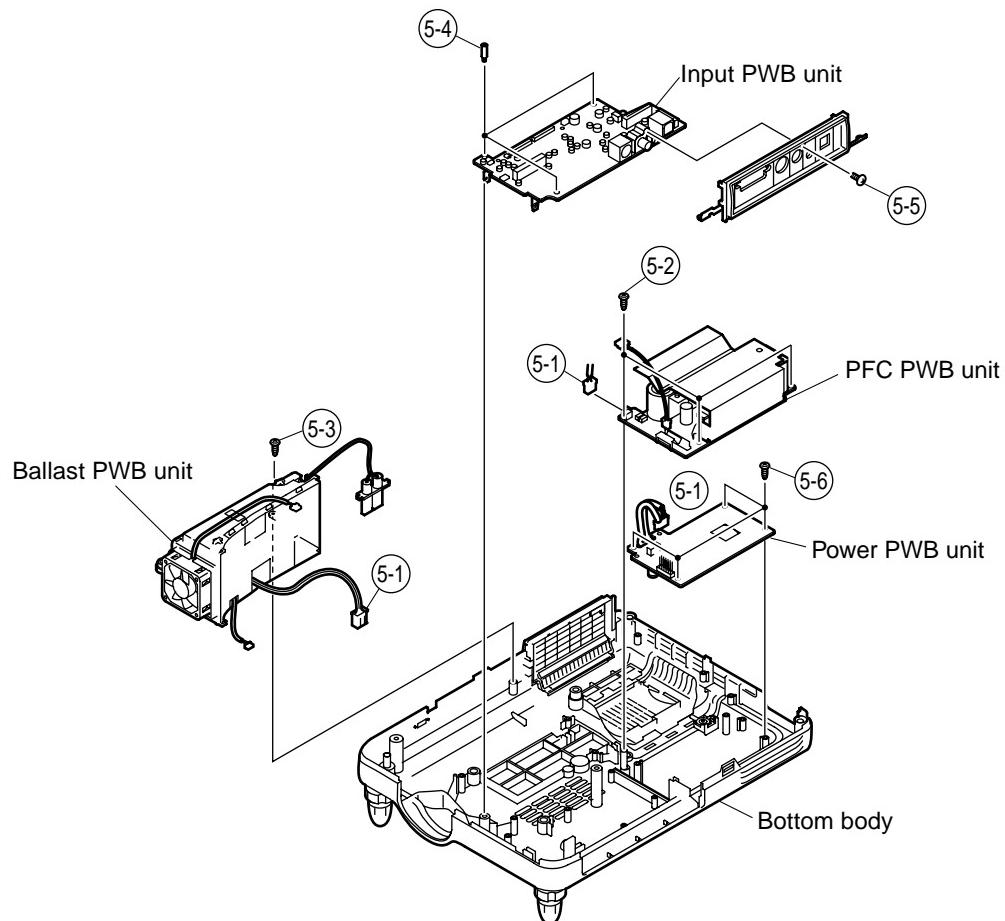
4. Removing the optical mechanism

- 4-1. Remove the two lock screws from the lamp socket.
- 4-2. Raise the two lamp socket lead fixtures.
- 4-3. Disconnect the connectors.
- 4-4. Remove the six lock screws from the optical mechanism.



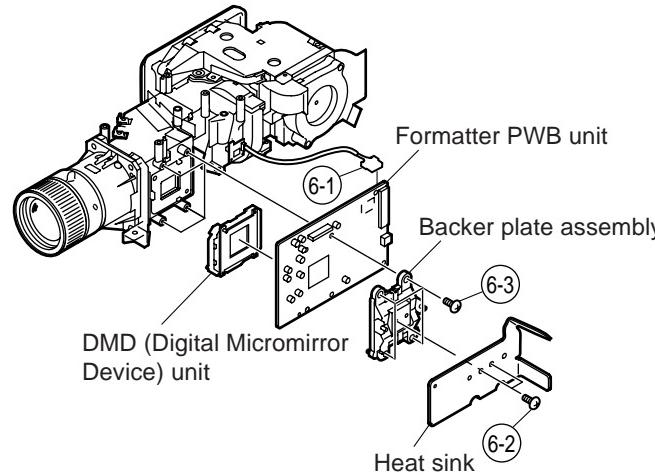
5. Removing the other PWBs

- 5-1. Disconnect the connectors.
- 5-2. Remove the four lock screws from the power PWB.
- 5-3. Remove the lock screw from the ballast PWB unit.
- 5-4. Remove the three hex support screws from the input PWB.
- 5-5. Remove the lock screw from the terminal block cover.
- 5-6. Remove the three lock screws from the PFC PWB.



6. Removing the formatter PWB

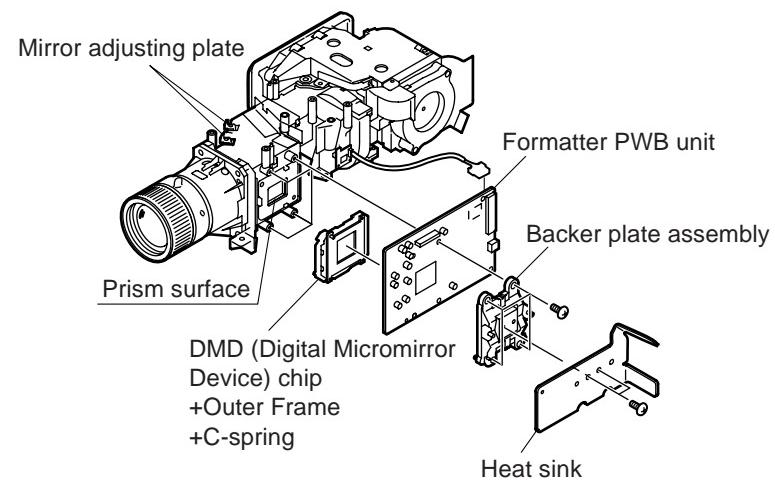
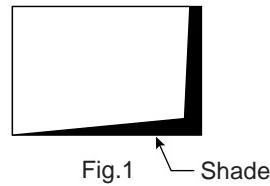
- 6-1. Disconnect the connector.
 - 6-2. Remove the two lock screws from the heat sink.
 - 6-3. Remove the four lock screws from the backer plate assembly, and detach the formatter PWB.
- Note: The DMD (Digital Micromirror Device) unit is easily affected by static electricity. In handling this unit, be sure to wear a wristband or take other anti-static measure.



Precautions in replacing the DMD chip

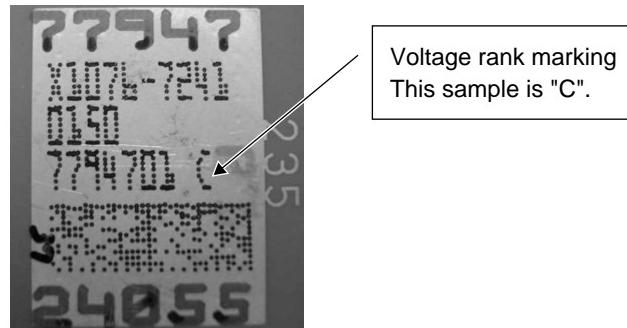
Note: Be careful not to allow dust and fingerprint on the cover glass of DMD chip and prism surface of optical engine.

1. When you fix 4screws of backer plate assembly, press backer plate to formatter PWB and fix by cross multiply step by step.
2. If something shade appears on the projection screen like Fig1, release 2 screws on mirror adjusting plate and move that plate to adjust illumination area of DMD chip.

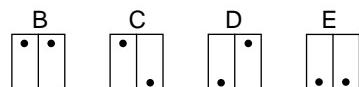


*** Precautions in setting up the DMD (Digital Micromirror Device) unit**

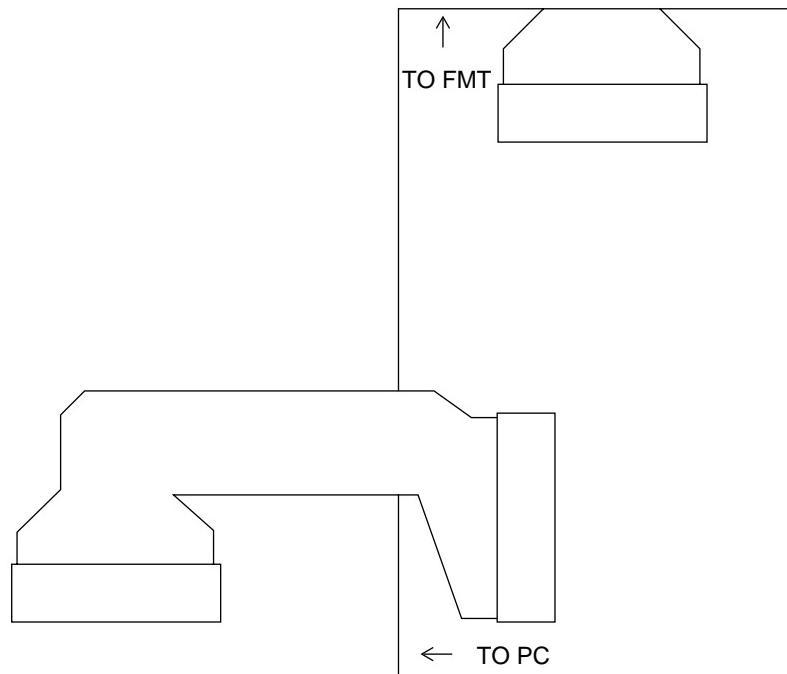
Before connecting the formatter PWB to the optical engine, take the following steps. Look at the voltage rank marking that is on the DMD itself. Referring to this marking, set the DIP switches on the formatter PWB. And connect this PWB to the optical engine. Wrong settings will adversely affect the system performance.



Voltage ranking system with the DIP switches on formatter PWB

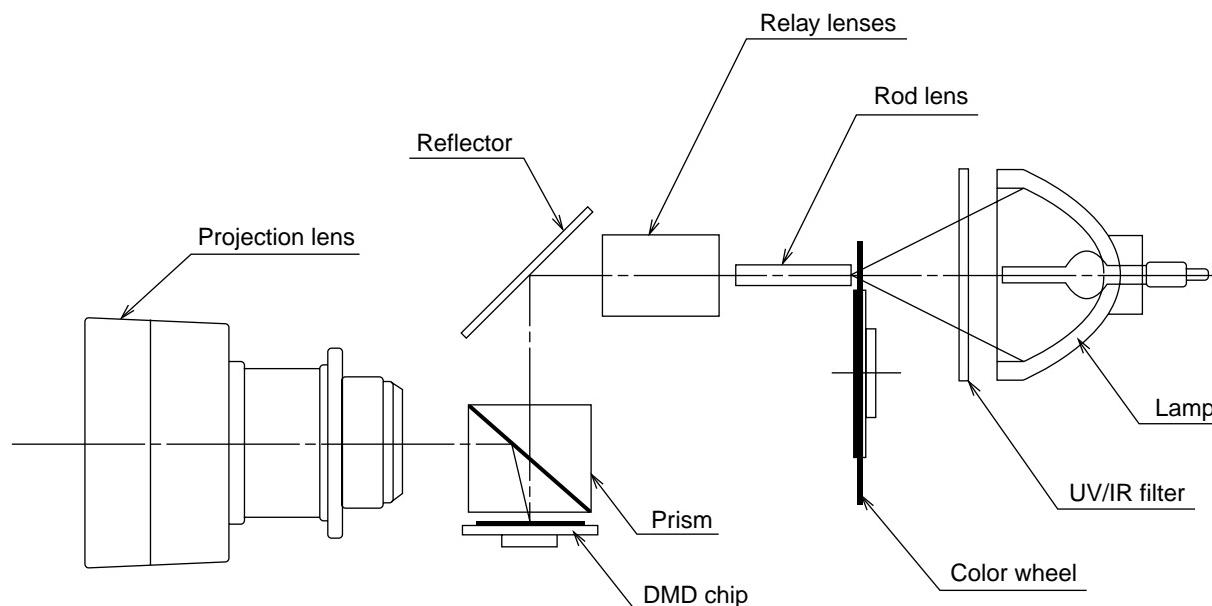
*** Connecting the FPC extension cables (QCNW-A298WJZZ)**

Connect the cables to the formatter PWB (TO FMT) and the PC I/F PWB (TO PC), referring to the silk-screen-printed markings. See the sketch below. (The FPC is already connected at TO PC.)



Outline of the optical unit

<Layout>



Item	Function
Lamp	Light source. DC-driven high-pressure mercury vapor lamp.
UV/IR filter	Used to absorb ultraviolet and infrared rays.
Color wheel	Used to let the source light through the color filter and to separate it into R, G and B colors.
Rod lens	Used to make for uniform light beams.
Relay lenses	Used to collect the light from the rod lens into the DMD chip.
Reflector	Used to reflect the light from the relay lenses against the DMD chip.
Prism	Used to introduce the light from the reflector over the effective surface of the DMD chip. When the micromirror gets tilted (ON) as specified, the reflected light is guided to the projection lens.
DMD chip	Used to turn on and off the micromirror in response to the ratio of color components at each dot and thus to reflect the incoming light accordingly.
Projection lens	Used to enlarge the light from the DMD chip and to get the light projected on the screen.

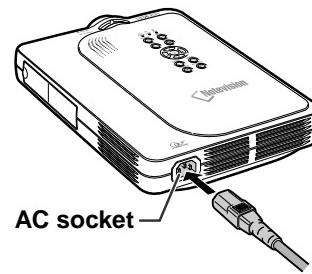
RESETTING THE TOTAL LAMP TIMER

Resetting the Lamp Timer

Reset the lamp timer after replacing the lamp.

1 Connect the power cord.

- Plug the power cord into the AC socket of the projector.

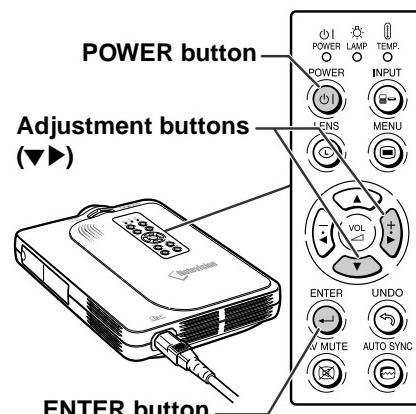


2 Reset the lamp timer.

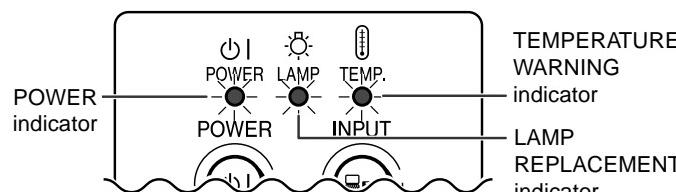
- While pressing simultaneously , , and on the projector, press on the projector.
- "LAMP 0000H" is displayed, indicating that the lamp timer is reset.

Info

- Make sure to reset the lamp timer only when replacing the lamp. If you reset the lamp timer and continue to use the same lamp, this may cause the lamp to become damaged or explode.



- The warning lights on the projector indicate problems inside the projector.
- If a problem occurs, either the TEMPERATURE WARNING indicator or the LAMP REPLACEMENT indicator will illuminate red, and the power will turn off. After the power has been turned off, follow the procedures given below.



About the TEMPERATURE WARNING indicator

If the temperature inside the projector increases, due to blockage of the air vents, or the setting location, will blink in the lower left corner of the picture. If the temperature keeps on rising, the lamp will turn off and the TEMPERATURE WARNING indicator will blink, the cooling fan will run for further 90 seconds, then the power will be shut off. After appears, be sure to perform the following measures.



About the LAMP REPLACEMENT indicator

- When the lamp exceeds 1,900 cumulative hours of use, will be displayed on the screen in yellow. When the cumulative hours of use reach 2,000, will change to red, the lamp will automatically turn off and then the projector as well. At this time, the LAMP REPLACEMENT indicator will illuminate in red.
- If you try to turn on the projector a fourth time without replacing the lamp, the projector will not turn on.



Maintenance indicator			Condition	Problem	Possible Solution
	Normal	Abnormal			
TEMPERATURE WARNING indicator	Off	Red on/ Power off	The internal temperature is abnormally high.	<ul style="list-style-type: none"> • Blocked air intake • Cooling fan breakdown • Internal circuit failure • Clogged air intake 	<ul style="list-style-type: none"> • Relocate the projector to an area with proper ventilation. • Take the projector to your nearest Sharp Authorized Projector Dealer or Service Center for repair.
LAMP REPLACEMENT indicator	Green on (Green blinks when the lamp is active.)	Red blinks	Time to change the lamp	<ul style="list-style-type: none"> • Lamp usage time exceeded 1,900 hours 	<ul style="list-style-type: none"> • Take the projector to your nearest Sharp Authorized Projector Dealer or Service Center for repair or lamp replacement.
		Red on/ Power off	The lamp does not illuminate.	<ul style="list-style-type: none"> • Burnt-out lamp • Lamp circuit failure 	<ul style="list-style-type: none"> • Please exercise care when replacing the lamp.

How to Release the System Lock

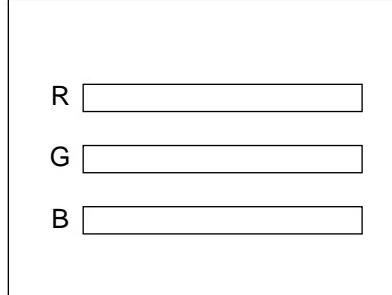
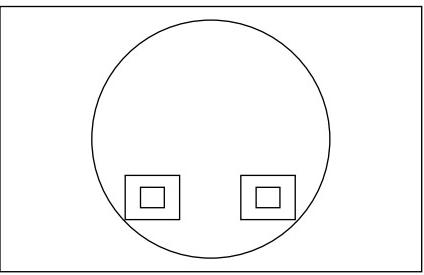
Turn on the power. If the system lock is applied, the system-resetting screen appears. Press the following keys in this order.

MENU → ENTER → ENTER → MENU → UNDO → UNDO → MENU



After pressing the MENU key first, press the remaining six keys within 10 seconds.

ELECTRICAL ADJUSTMENT

No.	Adjustment Items	Adjustment Conditions	Adjustment Procedures
1	Initialization of EEPROM	1. Turn on the power (the lamp lights up) and warm up the system for 15 minutes.	1. Carry out the following setting. Press SW2001 to enter the process mode, and execute S2 on SSS menu.
2	Adjustment of CW index	1. Signal input: 64-step color bar 2. Select the following group and subject. Group: DLP Subject: Select CW-INDEX.	1. Feed the signal to INPUT 1. 2. Select subject and make adjustment so that the lamp gradation patterns of R, G and B should be smooth without noise. 
3	Adjustment of RGB gradation reproduction	1. Feed the SMPTE pattern signal. 2. Select the following group and subject. Group: DLP Subject: G1-GAIN	1. Confirm that 100% and 95% white gradation, and 0% and 5% black gradation are discernible. 2. If the white gradation looks differently, do fine adjustment by G1-GAIN. 
4	Adjustment of video brightness/contrast	1. Feed the NTSC100% window pattern signal. (Burst signal) 2. Select the following group and subject. Group: VIDEO Subject: AUTO	1. After signal input, select AUTO using the set's switch or the remote controller's button for automatic adjustment.
5	Adjustment of video tint	1. Feed the split color bar signal. 2. Select the following group and subject. Group: VIDEO Subject: TINT	1. Confirm the fixed value. Fixed value: 128

No.	Adjustment Items	Adjustment Conditions	Adjustment Procedures
6	Adjustment of NTSC color saturation	<p>1. Feed the internal 8ch (split color bar) signal.</p> <p>2. Select the following group and subject. Group: VIDEO Subject: N-COLOR</p>	<p>1. Confirm the fixed value. Fixed value: 59</p>
7	Adjustment of PAL color saturation	<p>1. Feed the PAL color bar signal.</p> <p>2. Select the following group and subject. Group: VIDEO Subject: P-COLOR</p>	<p>1. Confirm the fixed value. Fixed value: 59</p>
8	Adjustment of SECAM color saturation	<p>1. Feed the SECAM color bar signal.</p> <p>2. Select the following group and subject. Group: VIDEO Subject: S-COLOR</p>	<p>1. Confirm the fixed value. Fixed value: 59</p>
9	Adjustment of COMPO G brightness	<p>1. Input signal: 0% gray pattern signal (480I)</p> <p>2. Select the following group and subject. Group: COMPO Subject: G-BRIGHT</p>	<p>1. Feed the signal to INPUT 1. Make adjustment so that some bits should be missing in the picture.</p>
10	Adjustment of COMP CR-Offset	<p>1. Feed the color difference signal (480I): Y 0% brightness, Cb and Cr 0% white patterns. Group: COMPO Subject: AUTO</p>	<p>1. After signal input, select AUTO using the set's switch or the remote controller's button for automatic adjustment.</p>
11	Automatic Adjustment of RGB white balance	<p>1. Feed the 50% gray pattern signal (XGA, 60 Hz [PG-M20X]/SVGA,60 Hz [PG-M20S]).</p> <p>2. Select the following group and subject. Group: DLP Subjects: R1-GAIN (Red) B1-GAIN (Blue)</p>	<p>1. Adjust R-1 GAIN and B1-GAIN so that x-value should be 266 ± 3 and y-value 320 ± 3.</p>
12	Automatic Adjustment of SRGB white balance	<p>1. Feed the 50% gray pattern signal (XGA, 60 Hz [PG-M20X]/SVGA,60 Hz [PG-M20S]).</p> <p>2. Select the following group and subject. Group: DLP Subjects: S-R1-GAIN (Red) S-G1-GAIN (Green) S-B1-GAIN (Blue)</p>	<p>1. Set the value of S-R1-GAIN to 34. 2. Adjust S-G1-GAIN and S-B1-GAIN so that x-value should be 310 ± 3 and y-value 335 ± 3.</p>

No.	Adjustment Items	Adjustment Conditions	Adjustment Procedures
13	Automatic adjustment of video white balance	1. Feed the 50% gray pattern signal (NTSC, burst signal). 2. Select the following group and subject. Group: DLP Subjects: V-R1-GAIN (Red) V-B1-GAIN (Blue)	1. Adjust V-R1-GAIN and V-B1-GAIN so that x-value should be 265 ± 3 and y-value should be 298 ± 3 .
14	Automatic adjustment of DTV white balance	1. Feed the 50% gray pattern signal (480I, color difference signal). 2. Select the following group and subject. Group: DLP Subjects: C-R1-GAIN C-B1-GAIN	1. Adjust C-R1-GAIN and C-B1-GAIN so that x-value should be 263 ± 3 and y-value should be 295 ± 3 .
15	Adjustment of DLP voltage (For reference)	1. Read voltage rank of DLP description. 2. Set the switch corresponding to the rank which has been read. (on the formatter PWB)	1. Carry out adjustment when DLP chip has been replaced or combination of chip and formatter has been changed. 2. Rank: B C D E Setting value: 1 2 3 4
16	Confirmation and re-adjustment of white balance	1. The adjusting conditions for each item are as follows: For RGB input, see Item 11 For SRGB input, see Item 13 For video input, see Item 14 For DVT input, see Item 12	Confirm that there is no deviation in white balance from that of the monitoring equipment. For readjustment, proceed in the order of RGB input, video input and DTV input.
17	Confirmation of color-related operation	1. Receive the color bar signal.	1. Select L1 in the process mode. Check the performance of color and tint.
18	Confirmation of picture-related operation	1. Receive monoscope pattern signal.	1. Select L2 in the process mode. Check Picture, Brightness and Sharpness.
19	Confirmation of RGB	1. Receive the RGB signal.	1. Select L4 on the process mode. Check Picture, Brightness, Red, Blue, Clock, Phase, H-POS and V-POS.
20	Confirmation of off-timer operation		1. Select OFF in the process mode. Confirm that the off-timer starts with 5-minute display, counts 1 minute for 1 second, and turns off when 0 minute is displayed.
21	Confirmation of thermistor operation	1. Heat the thermistor by dryer.	1. Confirm that the temperature is displayed.

No.	Adjustment Items	Adjustment Conditions	Adjustment Procedures				
22	Automatic sync operation	1. Receive the phase checking pattern signal.	1. Confirm that Clock, Phase, H-POS and V-POS can be automatically adjusted in the VGA/S-VGA/XGA mode.				
23	Confirmation of USB operation	Connect the set to a personal computer by USB cable.	Using the remote controller, make sure that feed and return operations are effective on the display of the personal computer.				
24	Factory settings		<p>1. Make the following settings.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Process adjustment</td> <td>Remote controller settings</td> </tr> <tr> <td>S4</td> <td>"Factory Setting 4"</td> </tr> </table>	Process adjustment	Remote controller settings	S4	"Factory Setting 4"
Process adjustment	Remote controller settings						
S4	"Factory Setting 4"						

How to Adjust the PC I/F unit

1. Initialization of EEPROM

- 1) Press SW2002 to enter the process mode.
- 2) Execute S1 on the SSS menu. (By S1, all the contents of EEPROM are initialized.)
- 3) Confirm that the program version "Ver. XXX" has become the latest one

2. Adjusting items

- 1) Adjustment of RGB drive/gain
 - (1) feed the window pattern signal that has 100% and 0% signals.
 - (2) Select AUTO among the A/D items in the process mode and carry out adjustment.

● Entering the adjustment process mode

There are following two methods.

- Press the SW2001 on the KEY PWB unit.
- Press the following keys in this order.

AV MUTE→AV MUTE→Adj up→Adj down→ENTER→ENTER→MENU



● Adjustment mode process menu

Group	Sub Group	Subject
Adjust PC Image	A/D	R-BRIGHT G-BRIGHT B-BRIGHT R-D B-D G-D AD-AUTO
Adjust DLP Image	DLP	R1-BLK R1-GAIN G1-BLK G1-GAIN B1-GAIN CW-INDEX S-R1-GAIN S-G1-GAIN S-B1-GAIN C-R1-GAIN C-B1-GAIN V-R1-GAIN V-B1-GAIN
Adjust VIDEO Image	VIDEO	PICTURE BRIGHT TINT N-COLOR P-COLOR S-COLOR STAT-GAIN VIDEO-AUTO
Adjust Component Image	DTV	G-BRIGHT CB-OFFSET CR-OFFSET COMPO-AUTO
Process mode	LINE	L1 L2 L3 OFF TEMP OFF SENSOR CHECK
INITIAL SETTING	SSS	TIME S1 S2 S3 S4 S5

Group	Sub Group	Subject
Sample Pattern	PATTERN	RGB RGB(50) CROSS FOCUS SETP COLOR CHR
Adjust CVIC	CVIC-PROGRSSIVE	MODE IP MDSW PTGSW C-TESTSW C-ILG-LY C-MOD-LY C-VE-LV
	CVIC-ENHANCE-VIDE	ENH-PLUS ENH-MINUS DFC
	CVIC-ENHANCE-HTTV	ENH-PLUS ENH-MINUS DFC
	CVIC-ENHANCE-RGB	MODE ENH-GAIN ENH-PLUS
	CVIC-SCREEN	CUBIC-RGB CUBIC-VEDEO
	CVIC-NR	YNR-LEVEL YNR-K YNR-FSEL CNR-LEVEL CNR-K CNR-FSEL CNR-FILSW
	CVIC-PTG	TESTSW ENABLE MV-F VDDTP
	CVIC-CMS	RED YELLOW GREEN CYAN BLUE MAGENTA
	CVIC-DEGAMMA	TABLE
Version Check etc	Special	IPL IPL2 E2PROM ADR RD/WR USB-MODE

How to write in a Serial number

Install the new program for the software into your PC

a.This software is downloaded from home page of SHARP intranet.

<http://172.24.145.13/tcg-qrc/prj/prj-e.asp>

NAME:USB to Sirial Driver program.

STEP 1

Set-up for USB Serial Driver

(Refer to "Installation Process and advice.doc" file.)

STEP 2

Call the adjustment process mode, and select the sub-group "SPECIAL" and the adjustment item "USB-MODE". Change the USB MODE value from 0 to 1.

(With this change, input of a 232C command becomes possible.)

STEP 3

Please connect the USB cable between the PC and the projector.

STEP 4

Please execute the program "TeraTerm".

(configuration file is to use attached Teraterm.ini.)

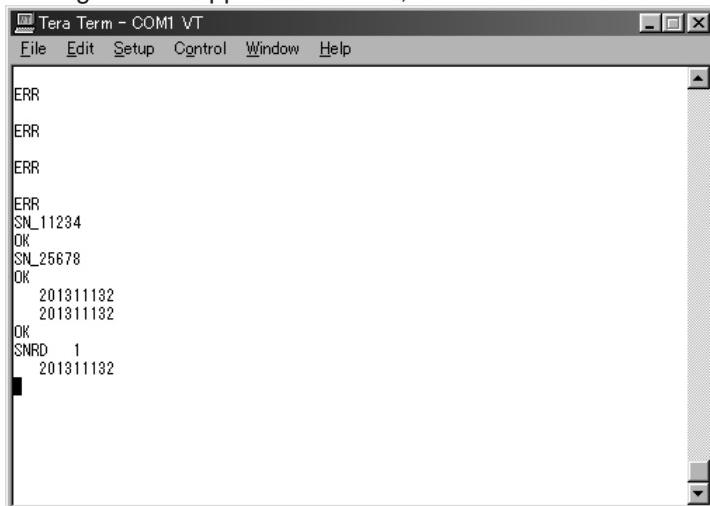
STEP 5

You write it by using the attached macro-file (serial_write.ttl).

A serial number is described in this macro-file. Enter this number.

STEP 6

Message will be appear as follows,



STEP 7

Please finish TeraTerm.

STEP 8

Please change the value from 1 to 0 for USB MODE in Special (Factory mode).

(For this change, input of a 232C command becomes invalid.)

<Attention >

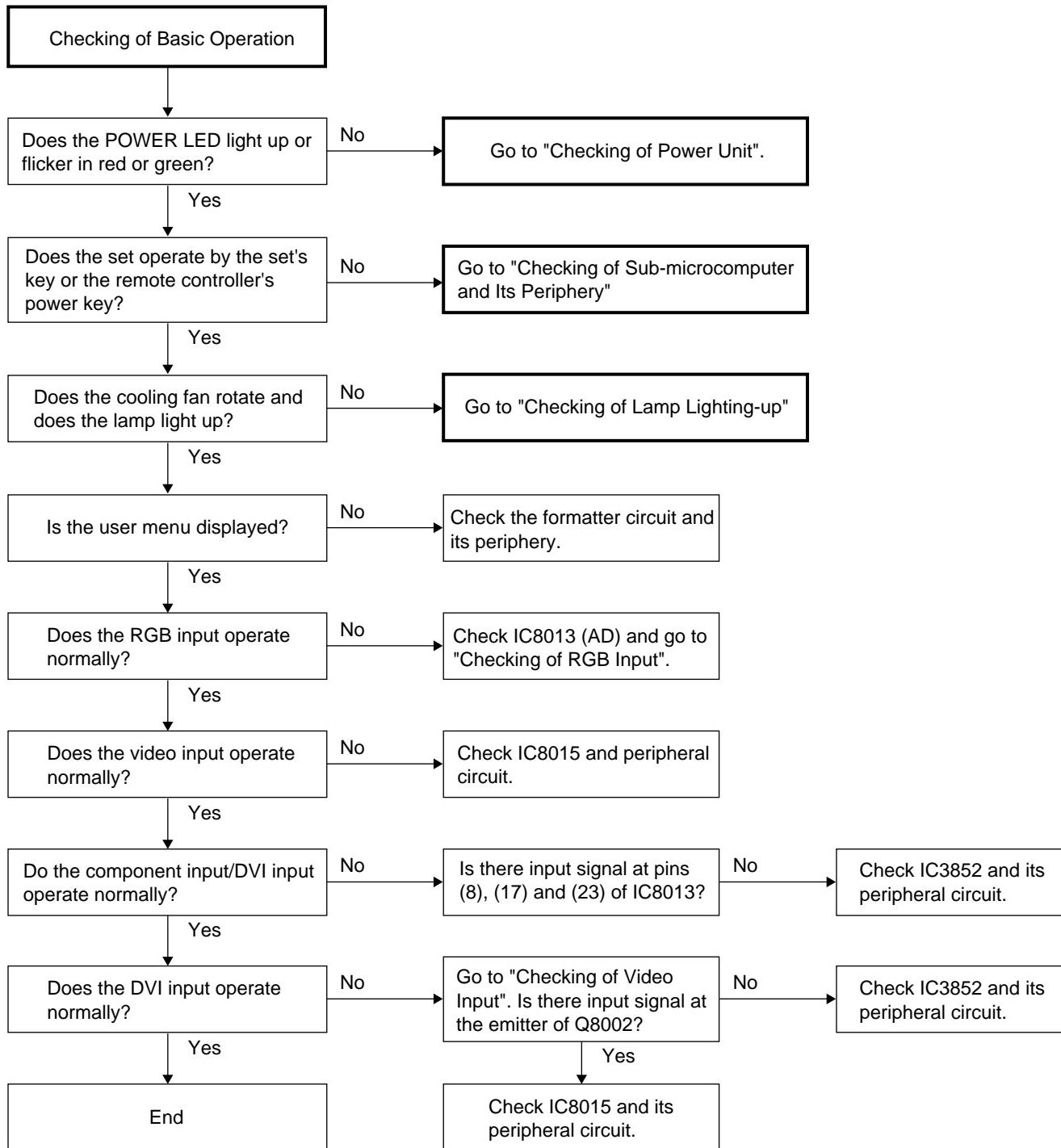
After the installation for USB to 232C driver, select the 232C with SW2002 on the KEY unit.

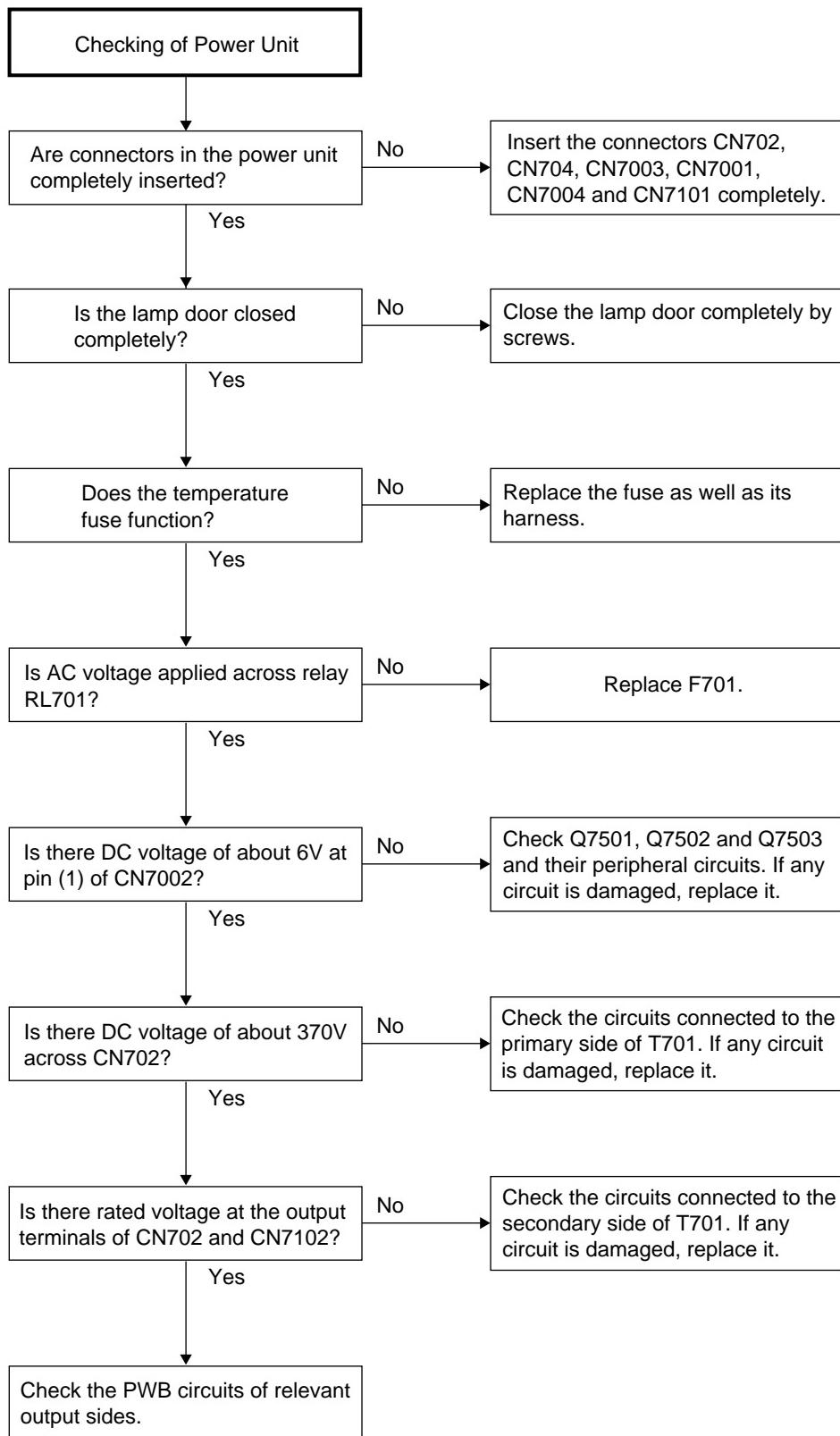
Connect the USB cable, and change COM2 for teraterm(setup-serial port) then push "Enter" key and confirm "ERR" message comes back.

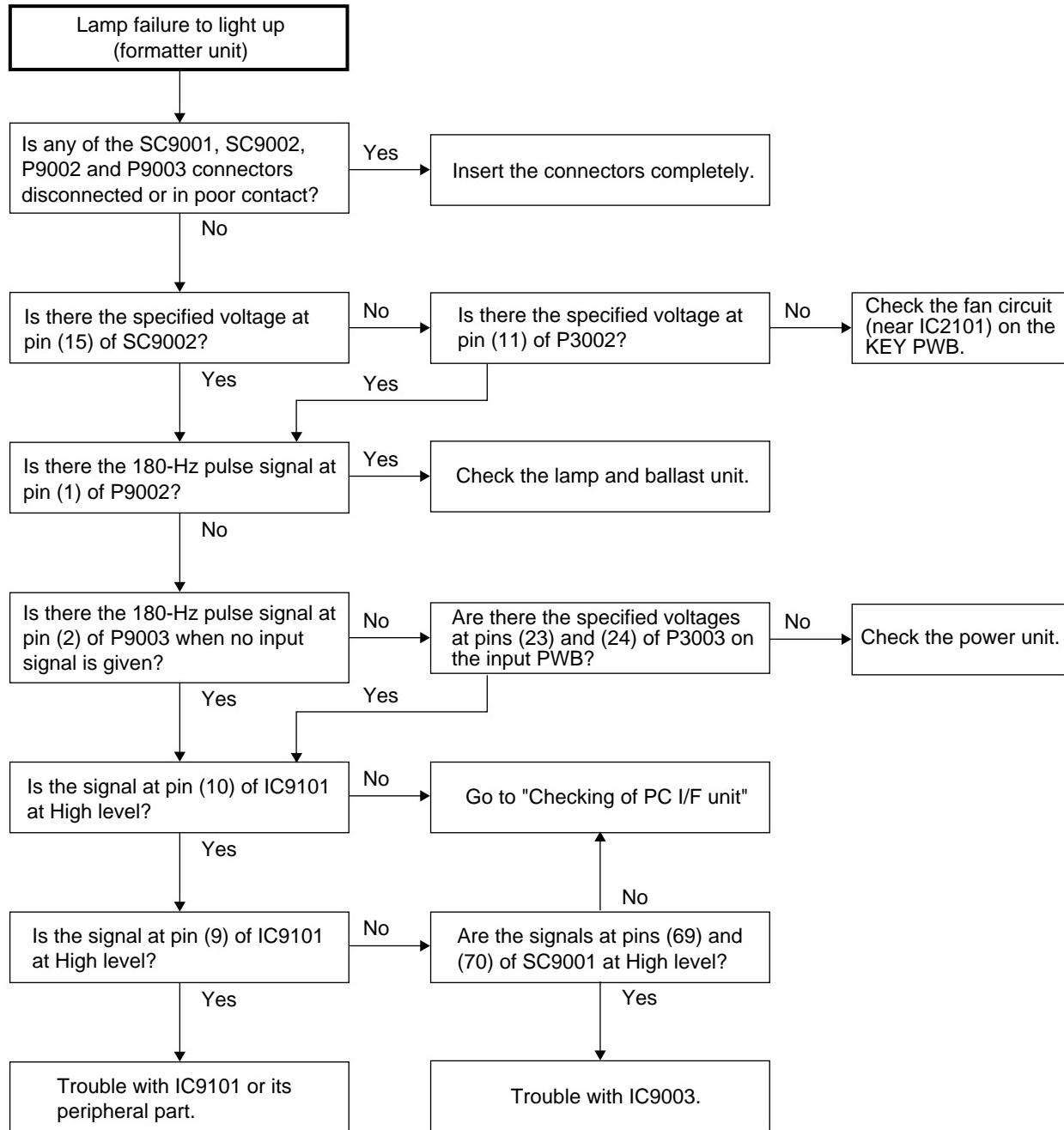
If "ERR" comes back setting is correct. In case of "ERR" does not come back, COM2 is incorrect.

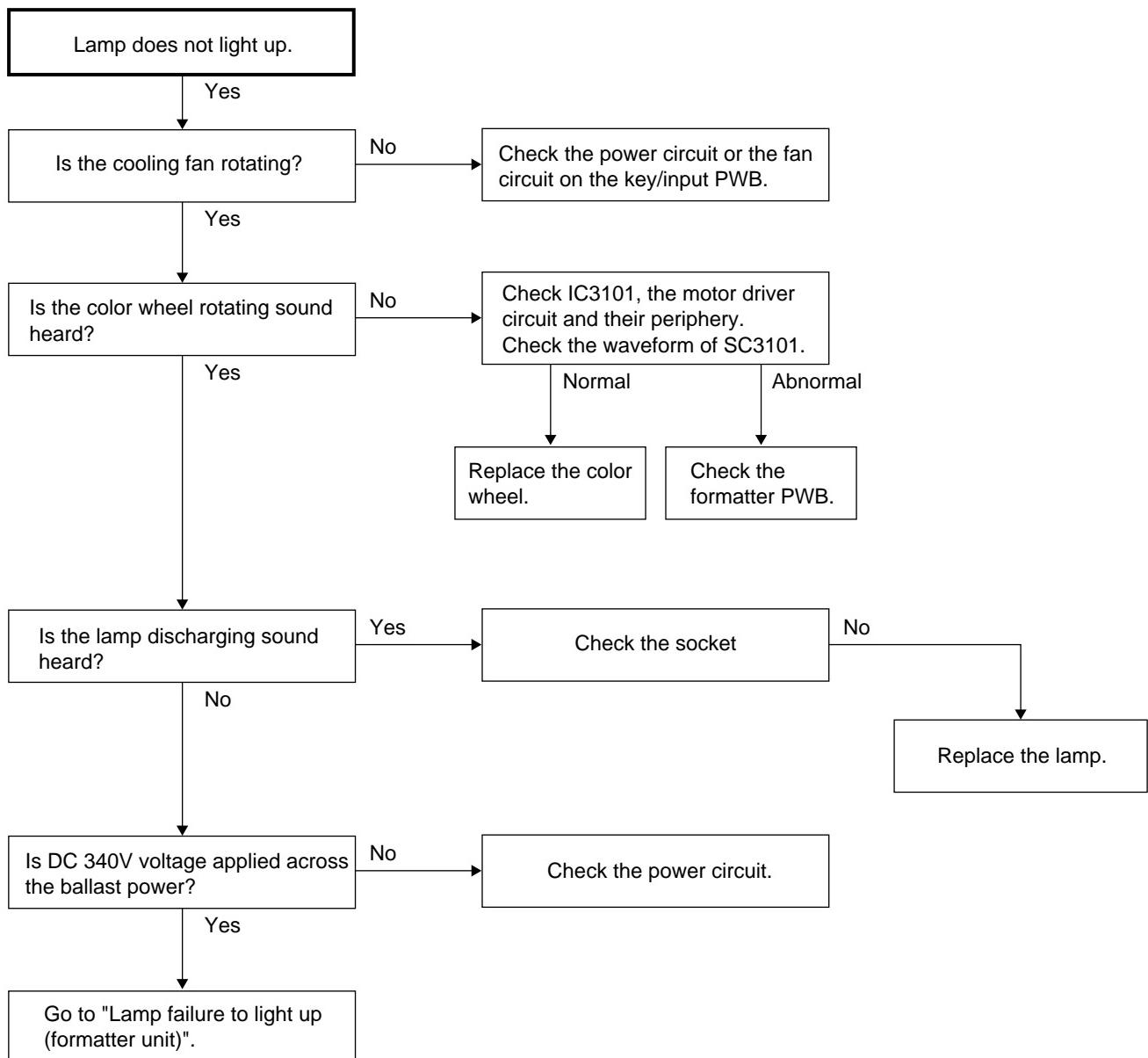
Please try COM3, COM4 by turn, and find correct COM port.

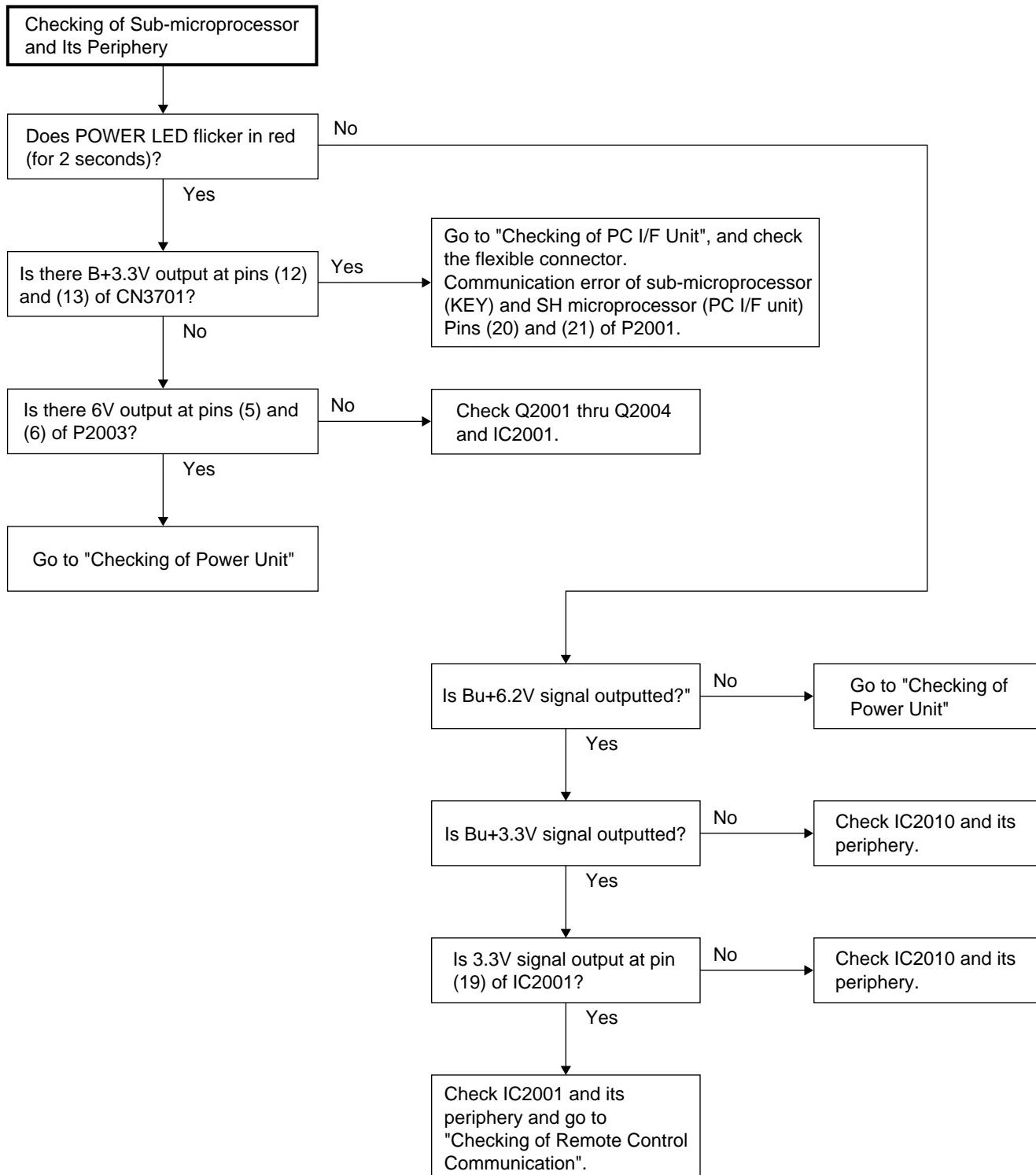
TROUBLE SHOOTING TABLE

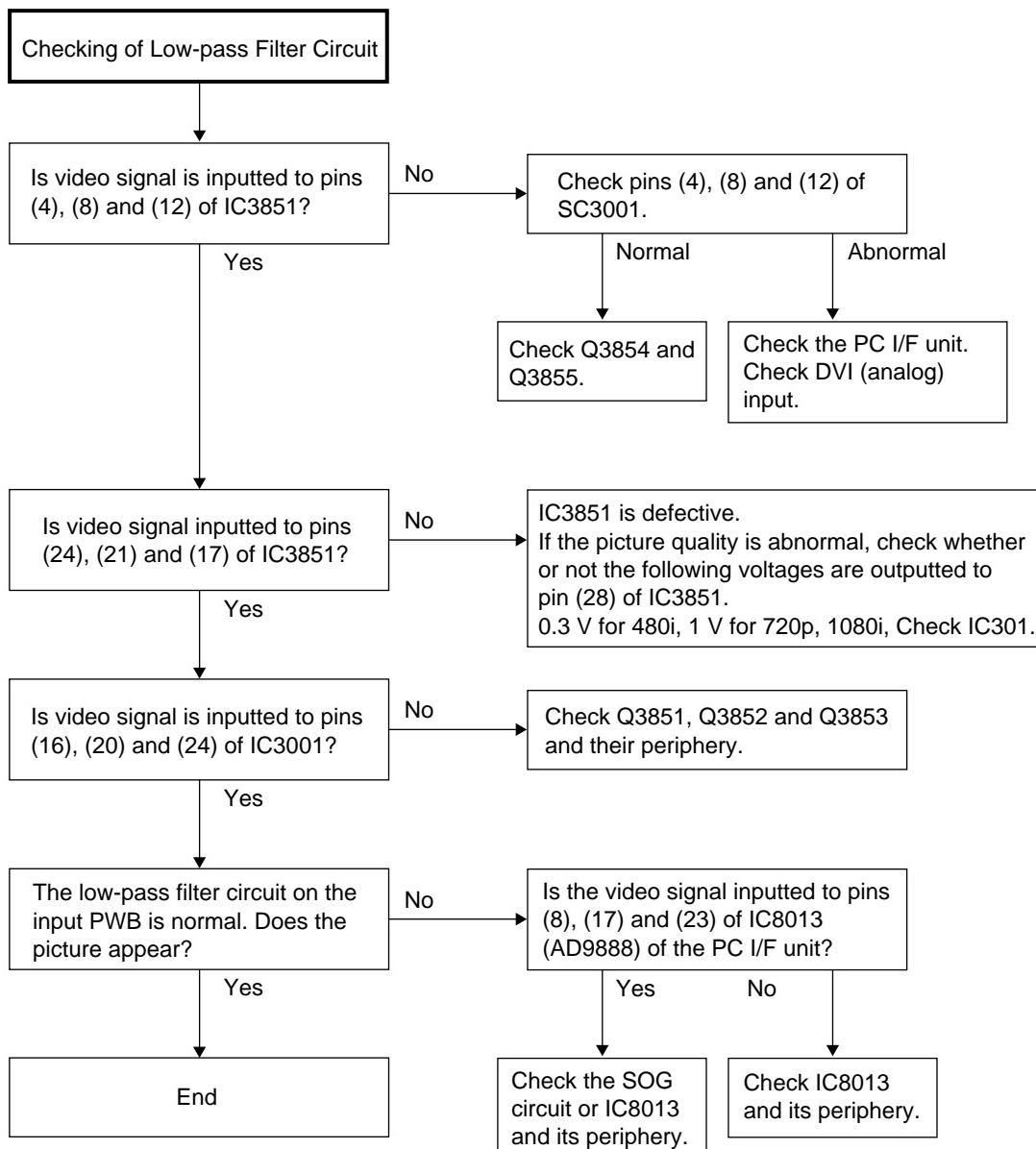


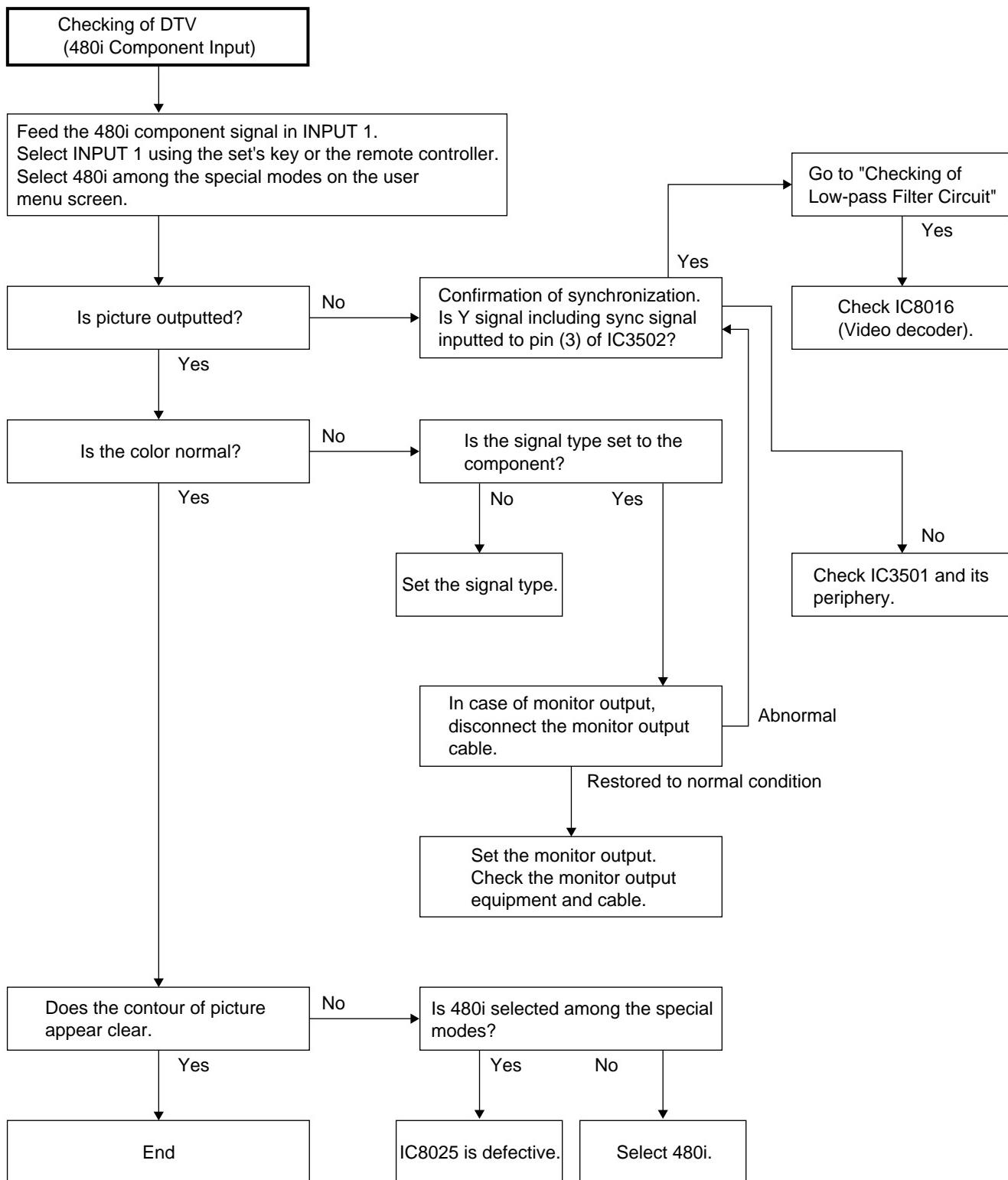


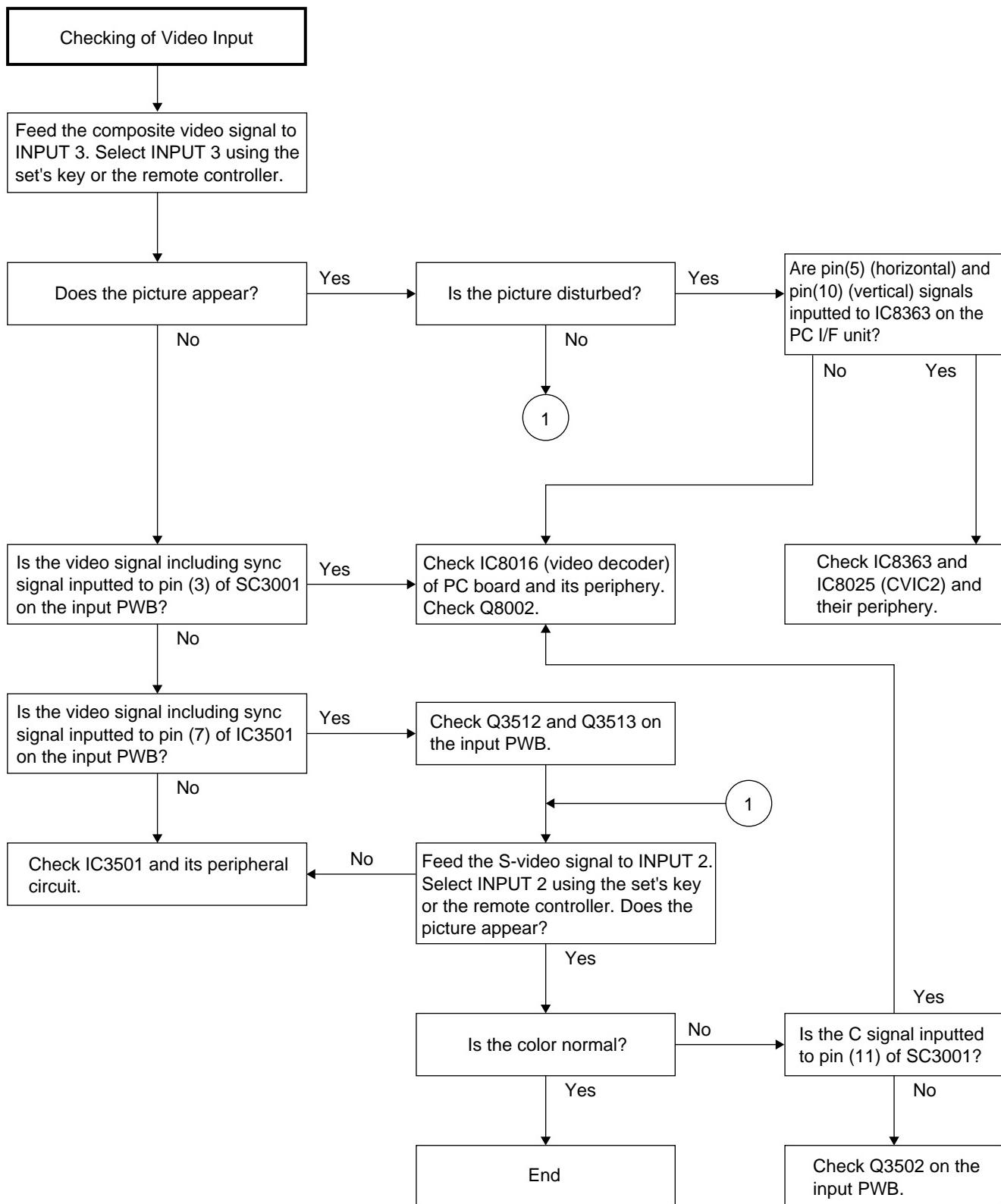




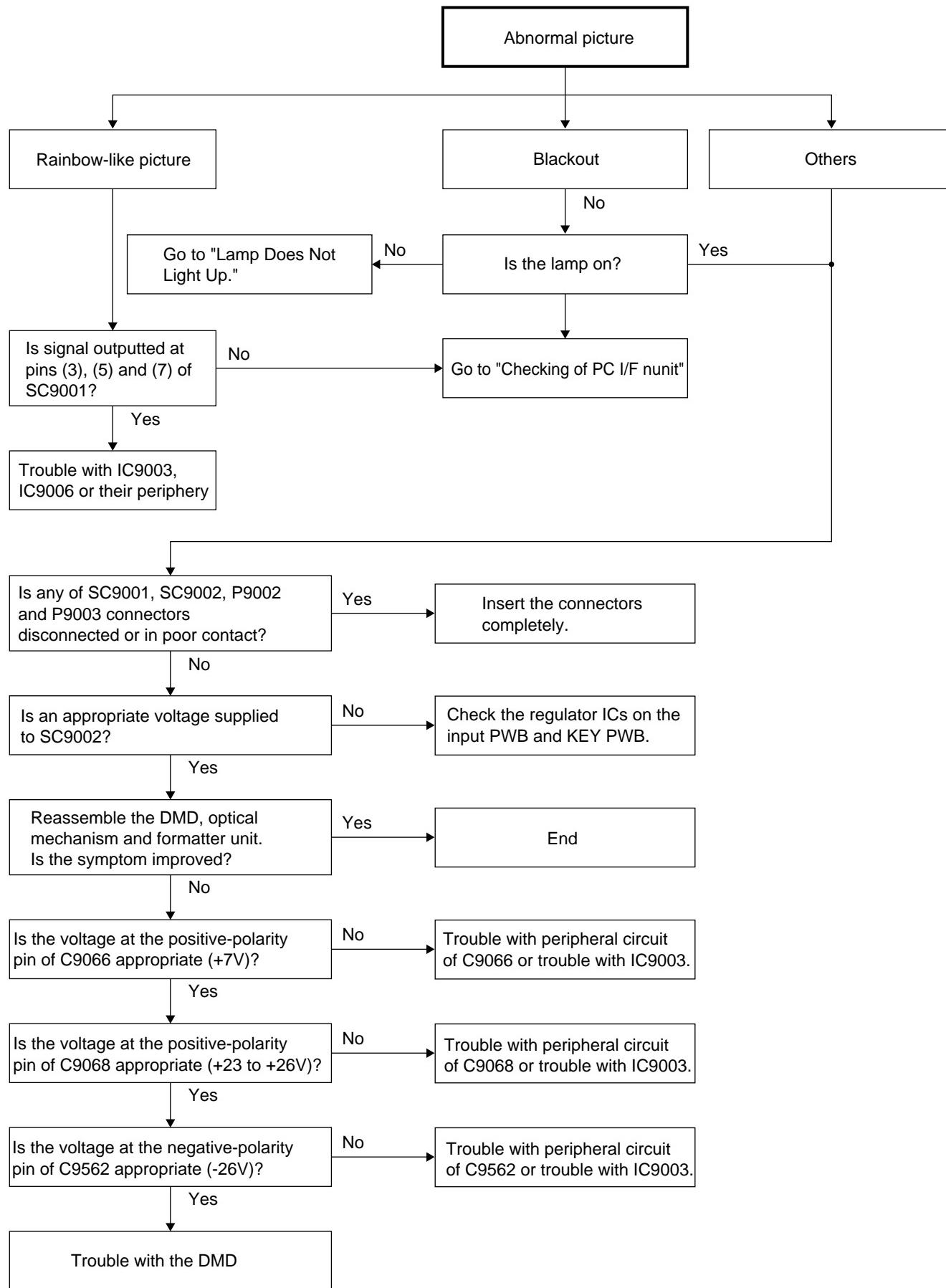




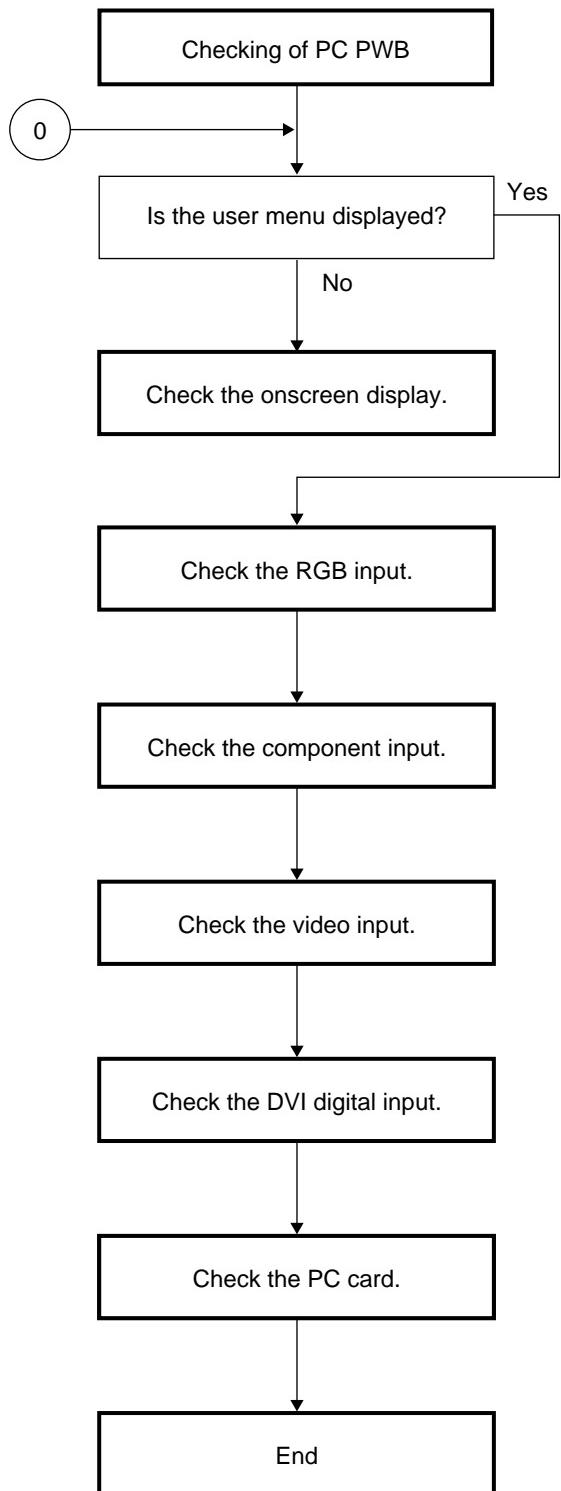




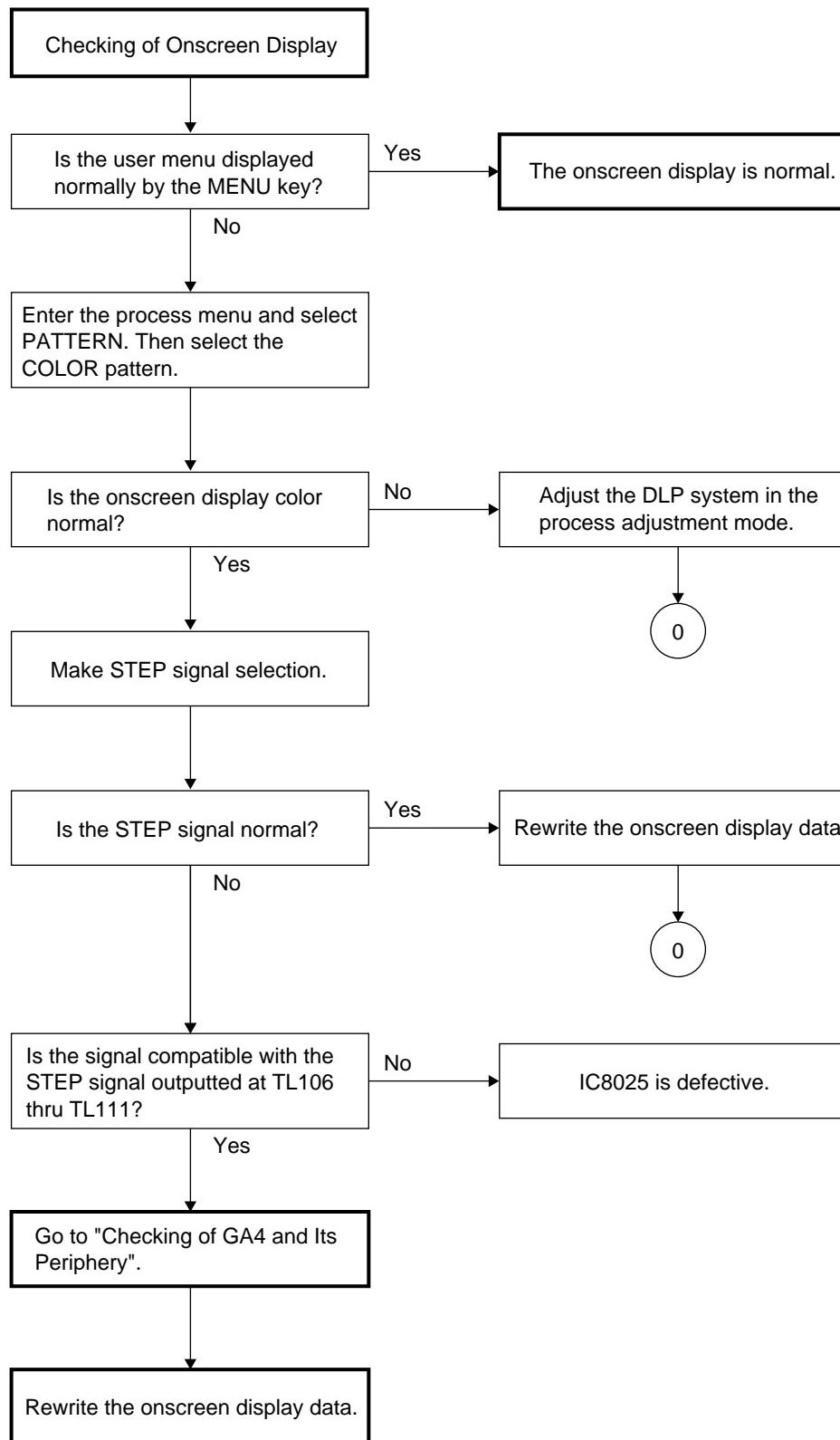
- FORMATTER Unit



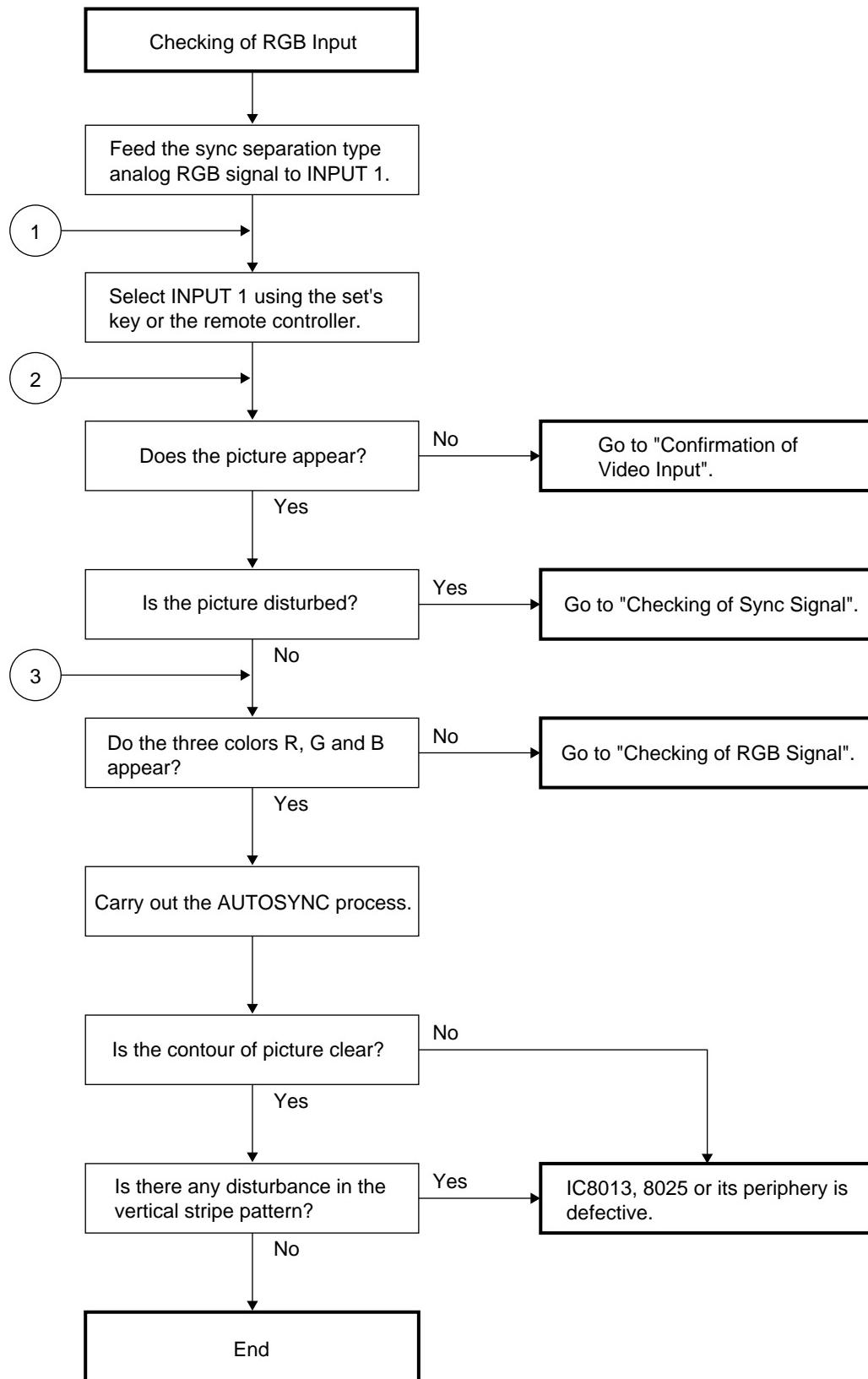
● PC I/F Unit-1/12



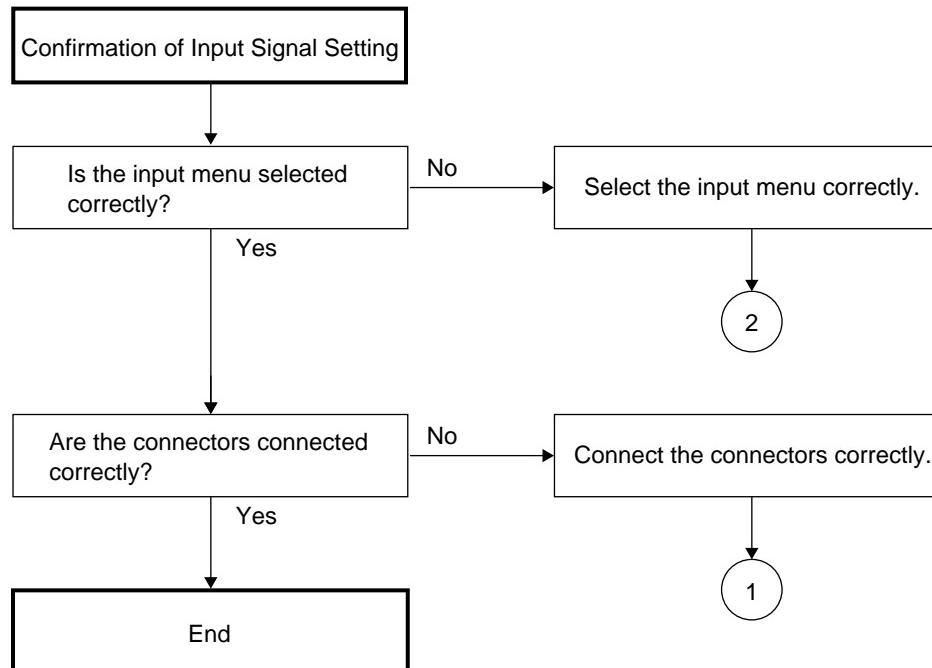
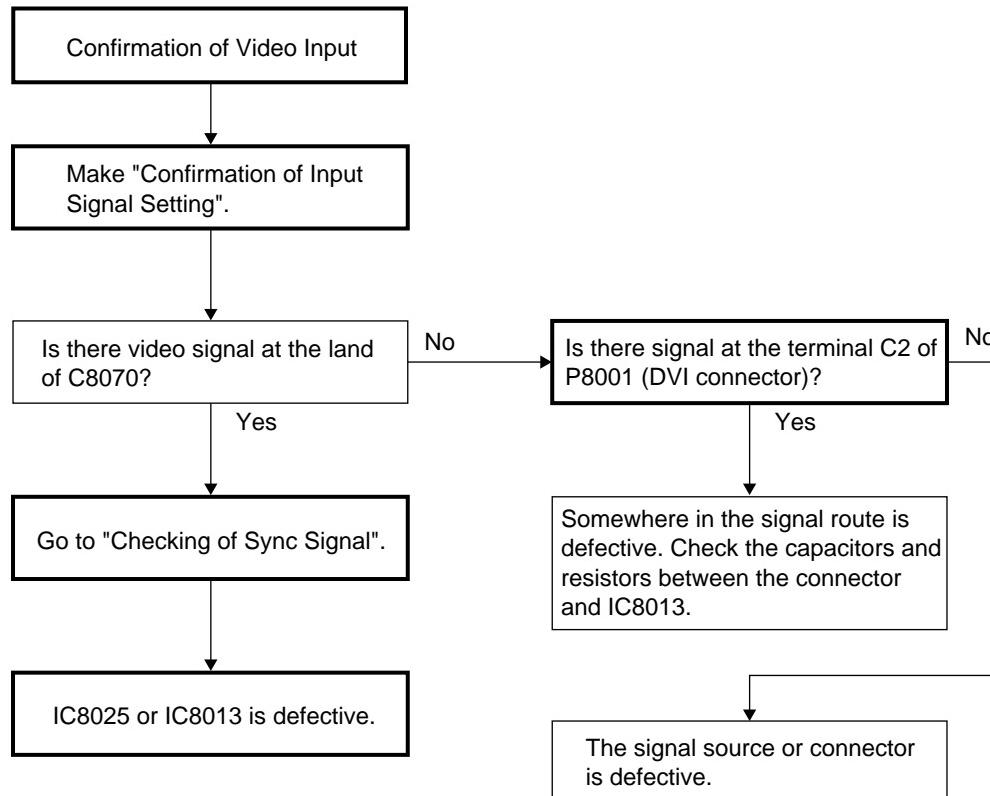
- PC I/F Unit-2/12



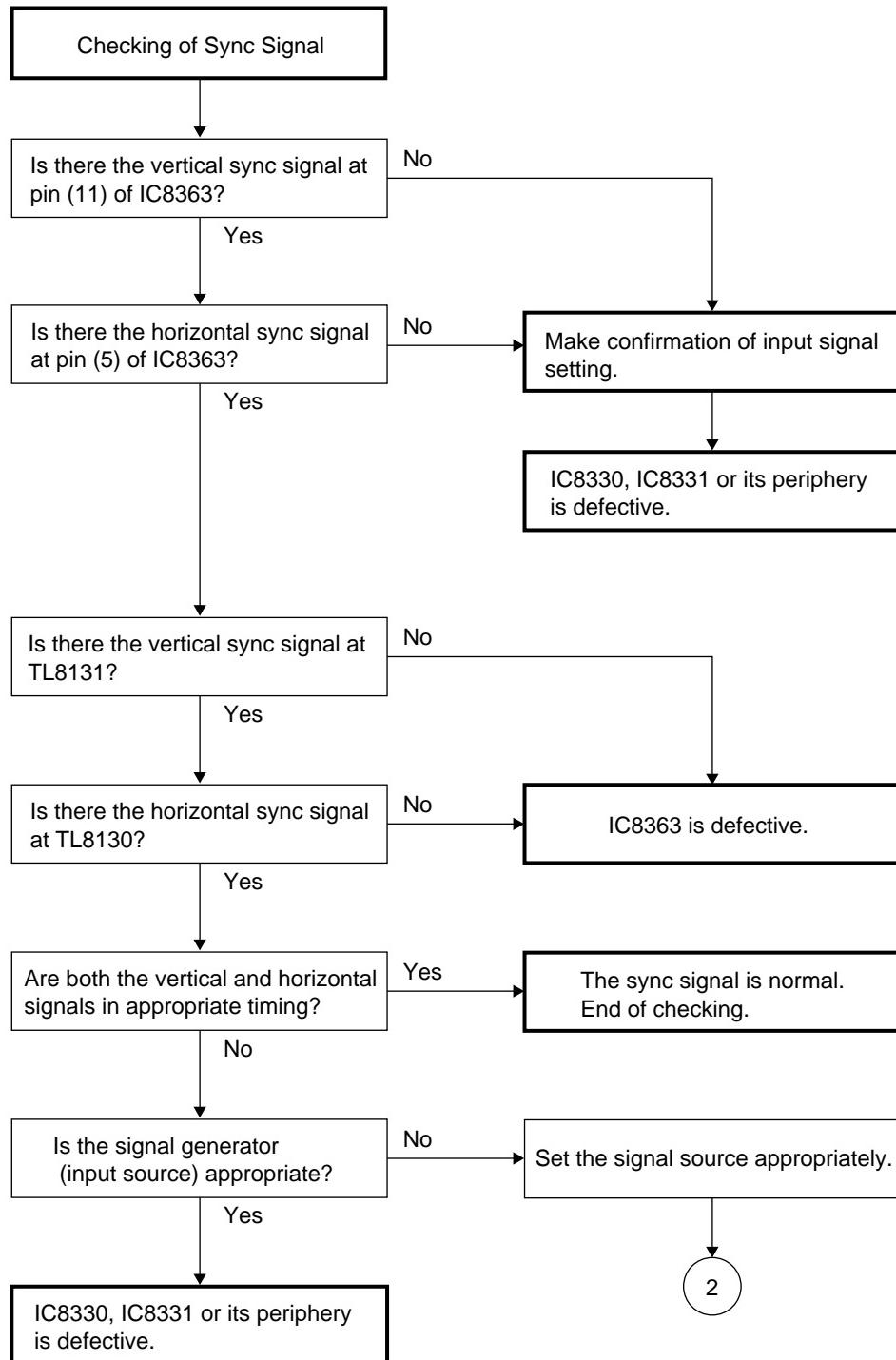
- PC I/F Unit-3/12



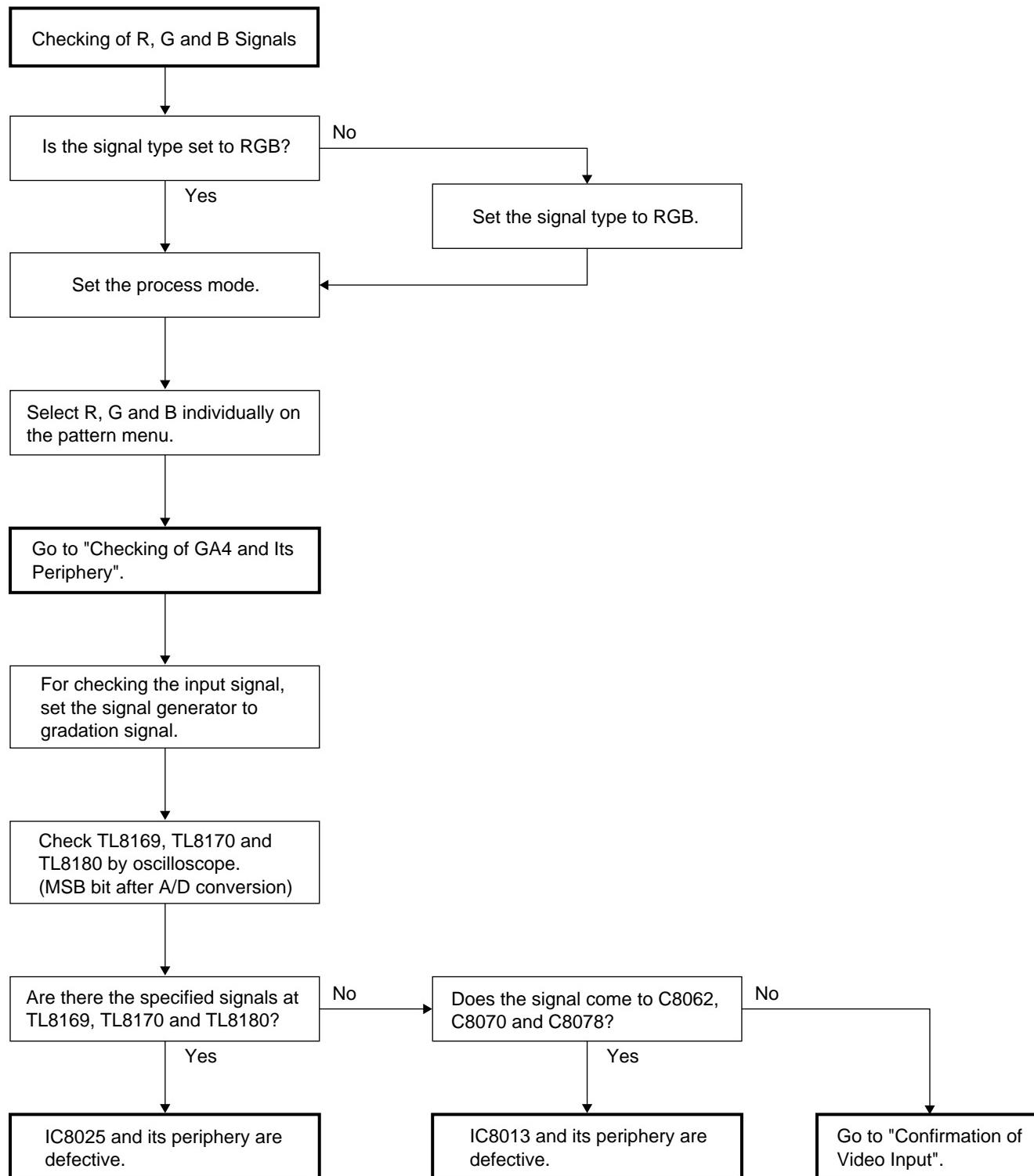
- PC I/F Unit-4/12



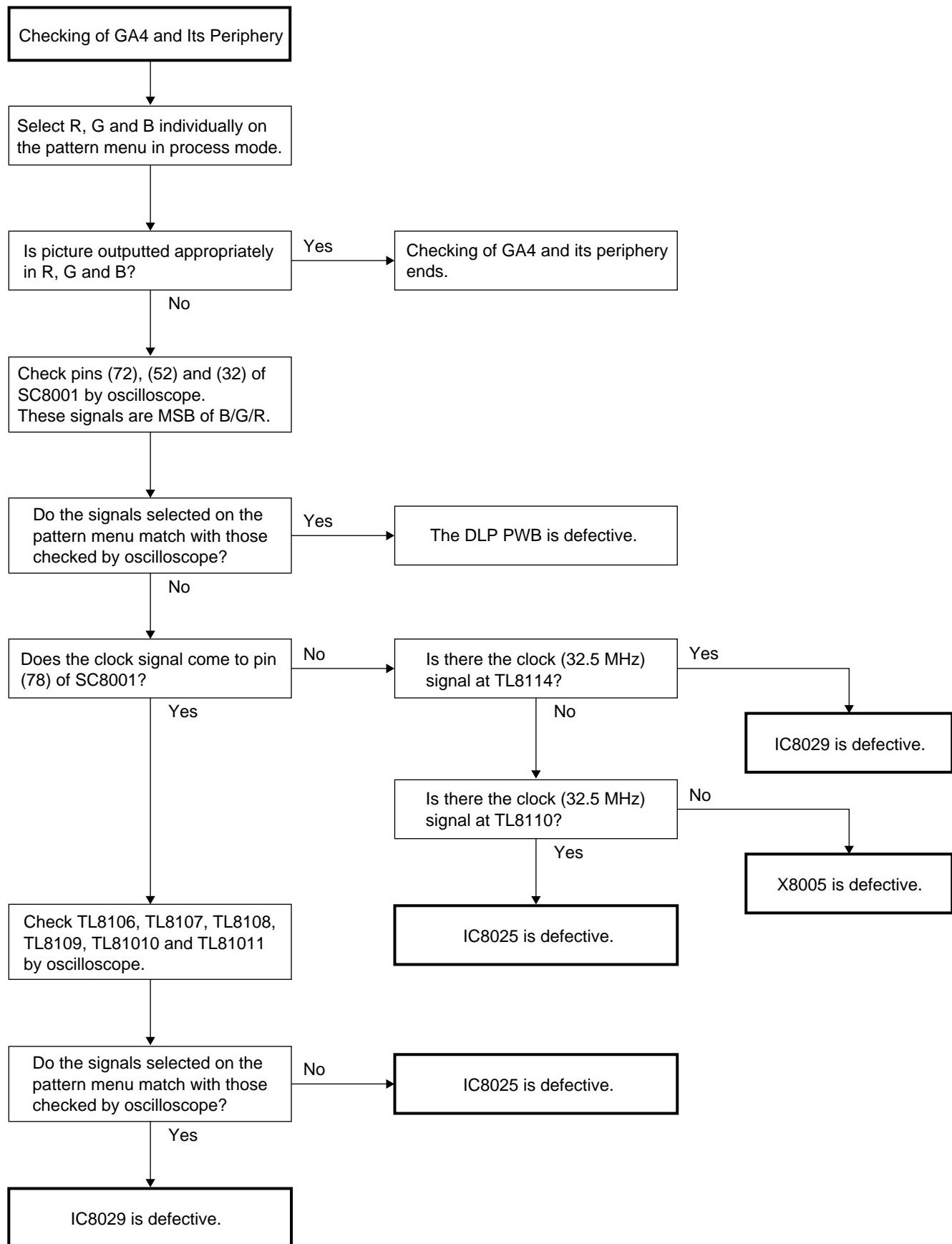
- PC I/F Unit-5/12



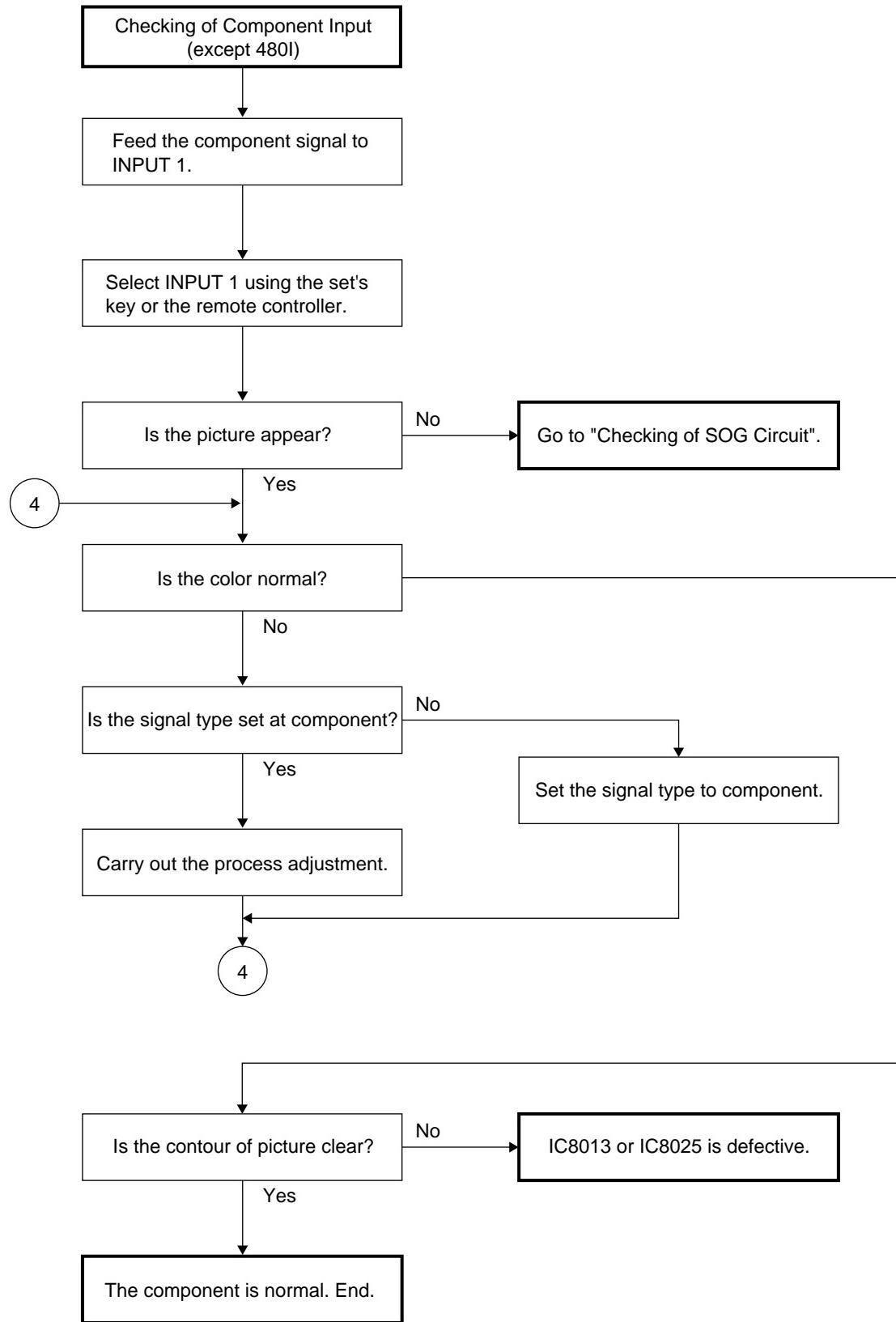
- PC I/F Unit-6/12



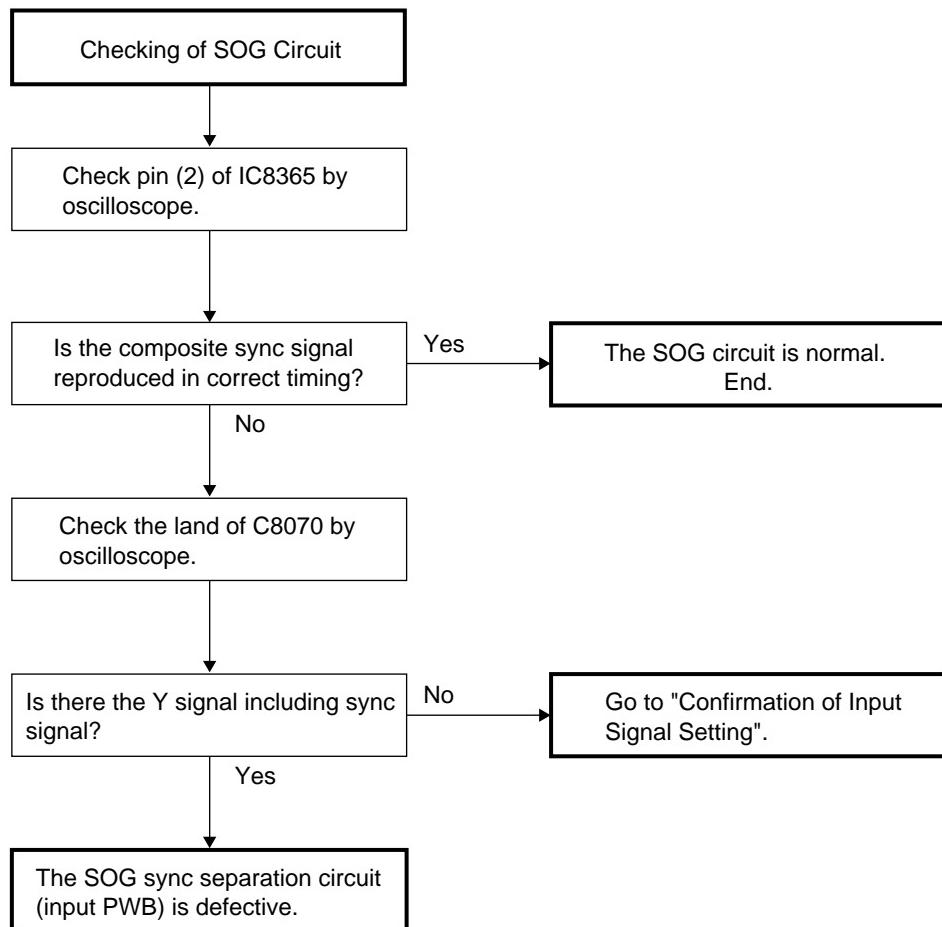
- PC I/F Unit-7/12



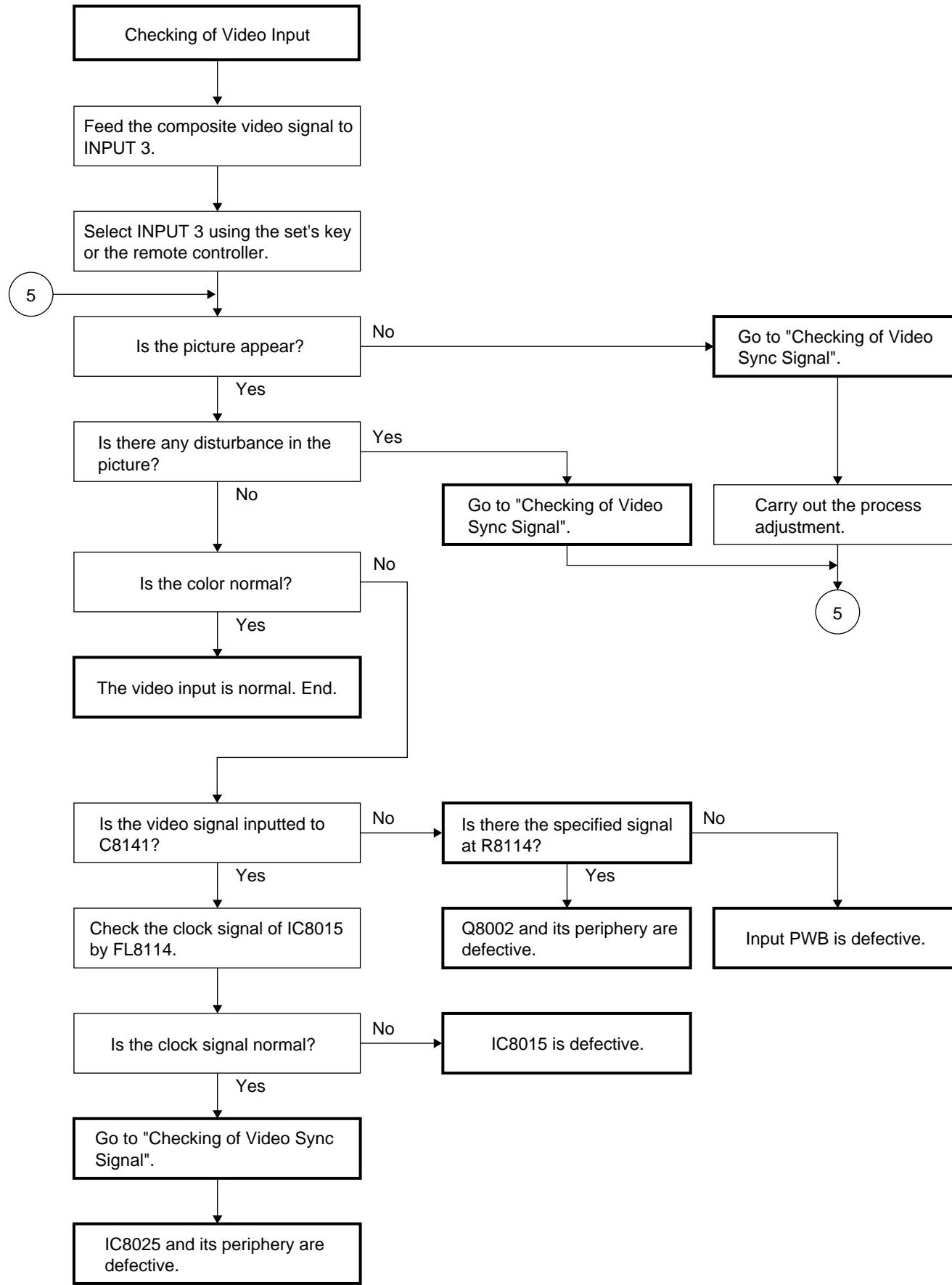
- PC I/F Unit-8/12



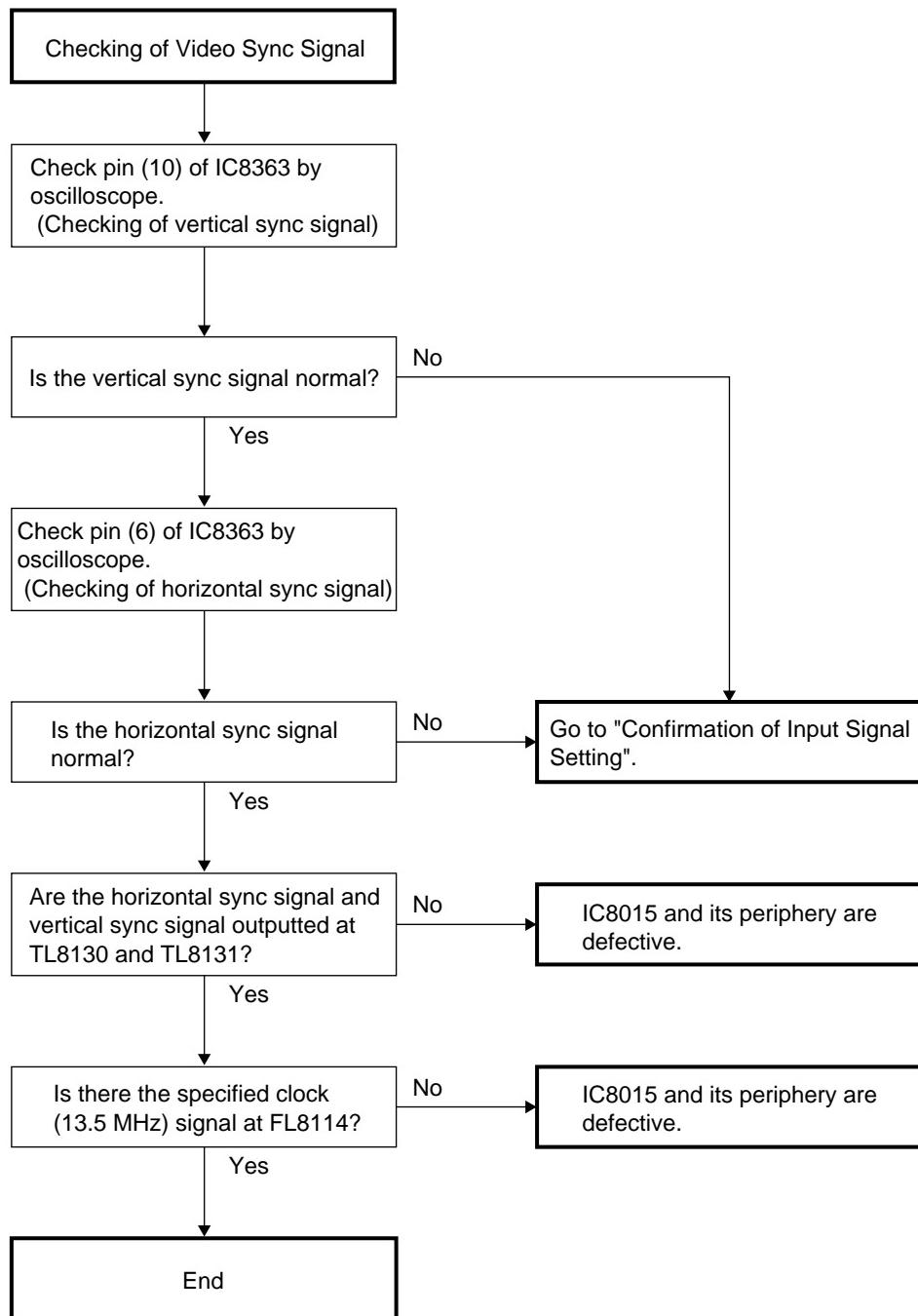
- PC I/F Unit-9/12



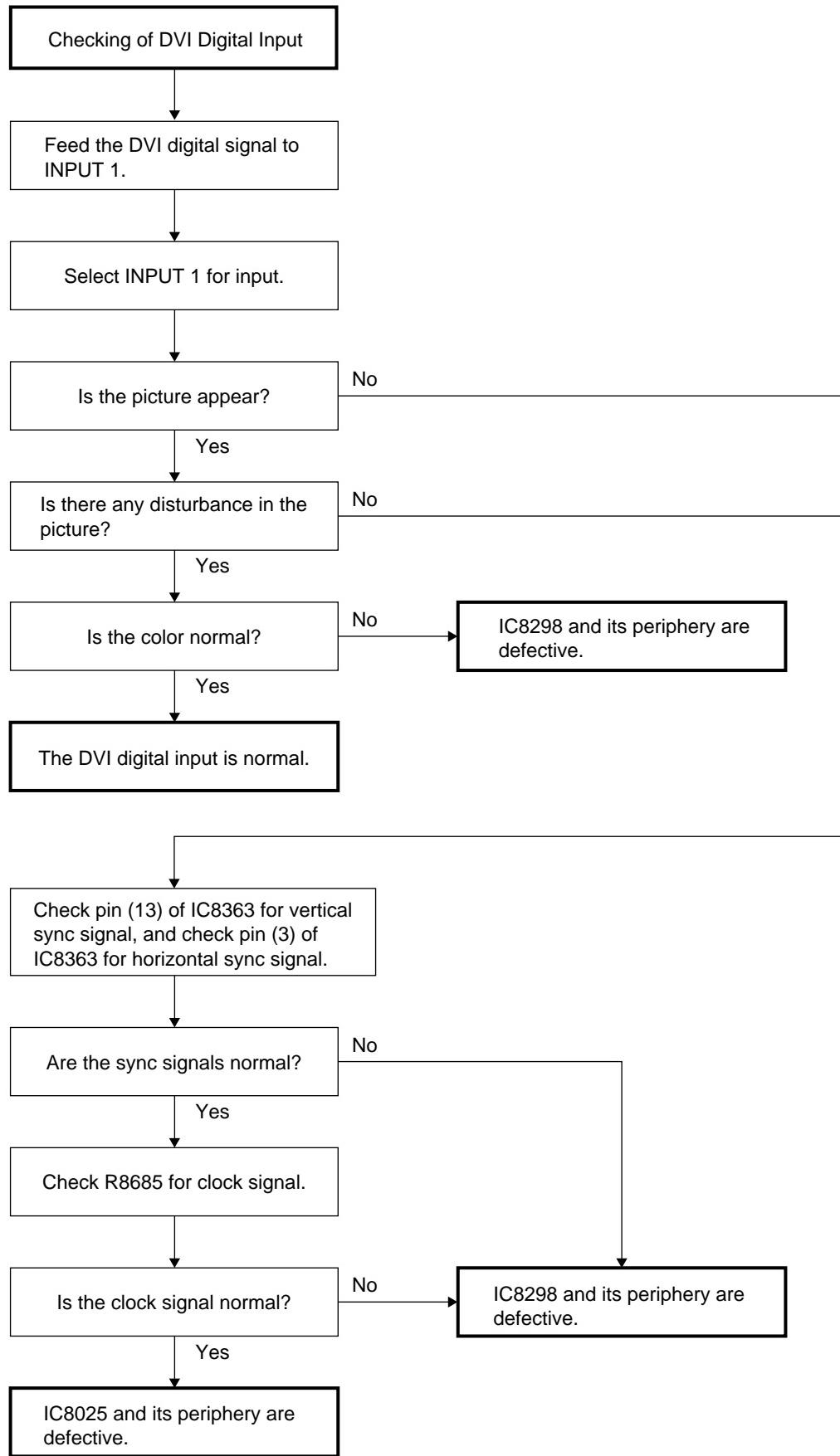
- PC I/F Unit-10/12



- PC I/F Unit-11/12



- PC I/F Unit-12/12



Technische Daten

Produkttyp	Digitaler Multimedia-Projektor
Modell	PG-M20X/PG-M20S
Videosystem	NTSC 3.58/NTSC 4.43/PAL/PAL-M/PAL-N/PAL 60/SECAM/ DTV480I/DTV480P/DTV720P/DTV1080I
Wiedergabeverfahren	Single Chip Digital Micromirror Device™ (DMD™) von Texas Instruments
DMD-Panel	Panel-Größe: 0,7" (17,8 mm), 1 Chip XGA DMD(PG-M20X)/ 0,55"(140.0mm), 1 chip SVGA DMD(PG-M20S)
	Anzahl der Bildpunkte: 786.432 Bildpunkte (1.024 [H] × 768 [V])(PG-M20X) 480.000 Bildpunkte (800 [H] × 600 [V])(PG-M20S)
Objektiv	1–1.2 × Zoom-Objektiv, F1.75–2.04, f = 28,0–33,5 mm
Projektionslampe	Hochleistungslampe (HID-Lampe), DC 210 W
Komponenten-Eingangssignale	29-pol. Anschluss
(INPUT 1)	DVI-Eingangssignal: Digital 250–1.000 mV 50 Ω Analog 0,7 Vs-s 75 Ω Y: 1,0 Vs-s, negatives Sync., 75 Ω terminiert P _b : 0,7 Vs-s, 75 Ω terminiert P _r : 0,7 Vs-s, 75 Ω terminiert
Horizontale Auflösung	700 Fernsehzeilen (DTV720P)(PG-M20X)/500 Fernsehzeilen (S-Video[NTSC3.58])(PG-M20S)
Computer-RGB-Eingangssignal	29-pol. Anschluss
(INPUT 1)	RGB getrennt/Sync auf Grün-Typ analoger Eingang: 0-0,7 Vs-s, positiv, 75 Ω terminiert HORIZONTALES SYNC.-SIGNAL: TTL-Pegel (positiv/negativ) VERTIKALES SYNC.-SIGNAL: Wie oben
S-Videoeingangssignal	4-pol. Mini DIN-Anschluss
(INPUT 2)	Y (Luminanzsignal): 1,0 Vs-s, negatives Sync., 75 Ω terminiert C (Chromianzsignal): Stoß 0,286 Vs-s, 75 Ω terminiert
Videoeingangssignal	RCA-Anschluss: VIDEO, gemischtes Video, 1,0 Vs-s, negatives Sync.,
(INPUT 3)	75 Ω terminiert
	Pixeltakt 12-230 MHz(PG-M20X)/12-120MHz(PG-M20S)
Vertikale Frequenz	43-100 Hz
Horizontale Frequenz	15-126 kHz(PG-M20X)/15-102kHz(PG-M20S)
Audioeingangssignal	ø 3,5 mm Minibuchse: AUDIO, 0,5 Vrms, mehr als 47 kΩ (Stereo)
Audioausgang	2,0 W (Mono)
Lautsprechersystem	4 cm × 3 cm
Nennspannung	100-240 V Wechselstromspannung
Eingangsspannung	3,2 A
Nennfrequenz	50/60 Hz
Leistungsaufnahme	290 W
Stromverlust	<1.090 kWh
Betriebstemperatur	41°F bis 95°F (+5°C bis +35°C)
Lagertemperatur	-4°F bis 140°F (-20°C bis +60°C)
Gehäuse	Plastik
I/R-Trägerfrequenz	38 kHz
Abmessungen (ca.)	8 5/8" × 3" × 11 15/16" (219 (B) × 76 (H) × 303 (T) mm) (nur Hauptgerät) 8 3/4" × 3 1/4" × 12 1/2" (223 (B) × 83 (H) × 318 (T) mm) (einschließlich Drehfüße und Projektionsteile)
Gewicht (ca.)	5,8 lbs. (2,6 kg)
Mitgeliefertes Zubehör	Fernbedienung, zwei R-03-Batterien, Netzkabel für USA, Kanada usw. (6', 1,8 m), Netzkabel für Europa, ausgenommen Großbritannien (6', 1,8 m), Netzkabel für Großbritannien, Hongkong und Singapur (6', 1,8 m), Netzkabel für Australien, Neuseeland und Ozeanien (6', 1,8 m), DVI an 15-Pin D-Sub-Kabel (6', 1,8 m), USB-Kabel (6', 1,8 m), Tragetasche, Objektivkappe (befestigt), Riemen für Objektivkappe, Anschlussabdeckung (befestigt), CD-ROM, Bedienungsanleitung, Kurzanleitung
Ersatzteile	Lampeneinheit (Lampen-/Gehäusmodul) (BQC-PGM20X/1) Fernbedienung (RRMCGA013WJSA), zwei R-03-Batterien ("AAA", UM/SUM-4, HP-16 oder ähnlich), Netzkabel für USA, Kanada usw. (QACCDAA007WJPZ), Netzkabel für Europa, ausgenommen Großbritannien (QACCV4002CEZZ), Netzkabel für Großbritannien, Hongkong und Singapur (QACCB5024CENA[PG-M20X]/QACCBA012WJPZ[PG-M20S]), Netzkabel für Australien, Neuseeland und Ozeanien (QACCL3022CEZZ), DVI an 15-Pin D-Sub-Kabel (QCNWGA010WJZZ), USB-Kabel (QCNWG0001WJPZ), Tragetasche (GCASN0005CESA), Objektivkappe (CCAPHA001WJ01), Riemen für Objektivkappe (UBNDT0013CEZZ), Anschlussabdeckung (GCOVD0103CESA), CD-ROM (UDSKA0058CEN1[PG-M20X]UDSKAA009WJZZ[PG-M20S]), Bedienungsanleitung (TINS-7609CEZZ[PG-M20X]/TINS-A209WJZZ[PG-M20S]), Kurzanleitung

Dieser Projektor von SHARP ist mit einem DMD-Panel ausgestattet. Diese neuartigen Panel enthalten 786.432 (PG-M20X)/480.000(PG-M20S) Bildpunkte.Bei allen technologisch fortschrittlichen, elektronischen Geräten, z. B. Großbild-Fernsehern,Videosystemen bzw. Videokameras, sind bestimmte Toleranzgrenzen für die Funktionen gegeben.

Dieses Gerät hat einige inaktive, innerhalb akzeptierter Toleranzgrenzen liegende Bildpunkte, die als leuchtende oder als nicht aktive Punkte auf der Bildwand wiedergegeben werden. Dies hat keinen Einfluss auf die Bildqualität oder die Lebensdauer des Gerätes.

Änderungen der technischen Daten ohne vorherige Ankündigung vorbehalten.

HINWEIS FÜR DAS WARTUNGSPERSONAL

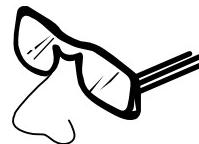
ACHTUNG: UV-STRÄHLUNG

Die Lichtquelle im Projektor, eine Metall-Halogen-Lampe, gibt eine geringe UV-Strahlung ab.

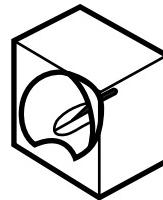
DIREKTE BESTRAHLUNG AUF AUGEN UND HAUT MUSS VERMIEDEN WERDEN.

Zur Gewährleistung der Sicherheit muß folgendes beachtet werden:

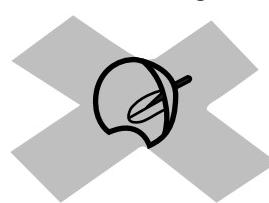
1. Bei Arbeiten am Projektor bei eingeschalteter Lampe und abgenommenem oberen Gehäuse muß unbedingt eine Sonnenbrille getragen werden.



2. Die Lampe darf nicht außerhalb des Lampengehäuses eingeschaltet werden.



3. Betrieb für länger als 2 Stunden bei abgenommenem Gehäuse ist nicht zulässig.



Zur Beachtung bei UV-Strahlung und Mitteldruck-Lampen

1. Vor dem Auswechseln der Lampe muß der Netzstecker gezogen werden.
2. Vor Durchführung von Wartungsarbeiten muß das Gerät eine Stunde abkühlen.
3. Nur mit dem gleichen Lampentyp ersetzen Typ BQC-PGM20X//1; Nennleistung 85 V/210 W.
4. Die Lampe gibt eine geringe UV-Strahlung ab, daher muß direkter Augenkontakt vermieden werden.
5. Die Mitteldruck-Lampe weist ein Explosionsrisiko auf. Daher müssen die nachstehenden Installationsanweisungen beachtet werden, und die Lampe muß vorsichtig behandelt werden.

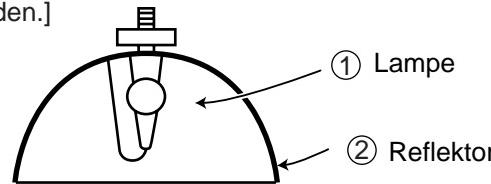
■ Auswechseln der Lampe

Hinweis:

Da die Lampe während des Betriebs sehr heiß wird, sollte die Lampe erst ausgewechselt werden, nachdem das Gerät mindestens eine Stunde ausgeschaltet war, damit die Lampe ausreichend abkühlen kann.

Beim Installieren der neuen Lampe muß darauf geachtet werden, die Lampe selbst (Glaskolben) nicht zu berühren. Vielmehr muß die Lampe am Reflektor ② gehalten werden.

[Es darf nur ein Original-Ersatzteil verwendet werden.]



GEFAHR! — Niemals die Spannungsversorgung einschalten, ohne daß eine Lampe vorhanden ist, um elektrische Schläge und Schäden am Gerät zu vermeiden, da der Stabilisator anfangs hohe Spannungen erzeugt.

Da eine geringe UV-Strahlung aus einer Öffnung zwischen der Schachtabdeckung und dem Lampengehäuse austritt, sollte der Objektivdeckel bei Wartungsarbeiten auf die Öffnung gesetzt werden, um die Bestrahlung von Augen und Haut zu vermeiden (Abb. 1).

Hinweis: Besorgen Sie sich einen Objektivdeckel, bevor Sie Arbeiten an einem Modelle PG-M20X/PG-M20S durchführen, das keinen Objektivdeckel aufweist.

Abbildung 1.

Vorsichtsmaßregeln für bleifreien Lötzinn

1 Verwendung von bleifreiem Lötzinn

Die "Eingangs-und Schlüssel-Platine" dieses Modells verwendet bleifreien Lötzinn. Das LF-Symbol zeigt bleifreien Lötzinn an und ist an den Platinen und Wartungsanleitungen angebracht. Der Buchstabe nach LF zeigt den Typ des bleifreien Lötzinns an.

Beispiel:

L F a

Sn-Ag-Cu

Zeigt bleifreien Lötzinn aus Zinn, Silber und Kupfer an.

2 Bei Reparatur der mit bleifreiem Lötzinn gelöteten Platine immer bleifreien Lötzinn verwenden. Reparatur mit herkömmlichem Lötzinn kann zu Schäden oder Unfällen aufgrund von Rissen führen.

Da der Schmelzpunkt bleifreien Lötzinns (Sn-Ag-Cu) um 40°C höher als der von Bleidraht-Lötzinn ist, empfehlen wir die Verwendung einer speziellen Lötspitze. Wenn Fragen über den Beschaffung leitfreien Lötzinns oder spezieller Lötspitzen bestehen, wenden Sie sich an unsere Kundendienstvertretung in Ihrem Gebiet.

3 Löten

Da der Schmelzpunkt bleifreien Lötzinns (Sn-Ag-Cu) etwa 220°C beträgt, was um 40°C höher als der von bleihaltigem Lötzinn ist, und außerdem schlechte Löt-Benetzbarkeit aufweist, kann es erforderlich werden, die Lötspitze längere Zeit in Kontakt mit der Platine zu halten. Da die Lötlauge abfliessen kann oder der maximale Hitzewiderstand von Teilen überschritten werden kann, die Lötspitze sofort von der Platine nehmen, sobald eine gute Lötung erzielt ist. Bleifreier Lötzinn enthält mehr Zinn, und das Ende der Lötspitze kann leicht angegriffen werden. Immer sicherstellen, dass der Lötkolben nur bei Bedarf eingeschaltet wird.

Wenn ein anderer Typ von Lötzinn an der Lötspitze haften bleibt, verschmilzt er mit dem bleifreien Lötzinn. Die Lötspitze nach jeder Verwendung reinigen.

Wenn die Lötspitze bei der Verwendung geschwärzt wird, die Spitze mit Stahlwolle oder feinem Sandpapier abschmirgeln.

Immer beim Austausch von Teilen vorsichtig sein, und die Polaritätsanzeige auf der Platinenbeschriftung beachten.

Bleifreier Lötzinn zur Wartung

Teile-Nr.	★	Beschreibung	Code
ZHNDAi123250E	J	Ø0.3mm 250g(1roll)	BL
ZHNDAi126500E	J	Ø0.6mm 500g(1roll)	BK
ZHNDAi12801KE	J	Ø1.0mm 1 Rolle	BM

Bedienelemente

Projektor (Vorder- und Draufsicht)

LAMP-Anzeige (Lampenaustausch)

Leuchtet normalerweise grün. Die Lampe austauschen, wenn die Anzeige rot leuchtet.

POWER-Anzeige (Netz)

Leuchtet rot, wenn sich der Projektor im Bereitschaftsbetrieb befindet. Wenn die Stromversorgung eingeschaltet ist, leuchtet diese Anzeige grün.

POWER-Taste

Schaltet die Stromversorgung ein oder aus.

LENS-Taste

Für das Einstellen der Trapezverzerrungs- oder Digitalen Verschiebungs-Einstellung.

Einstelltasten (↓ ↑ ← →)

Für die Wahl der Menüpunkte.

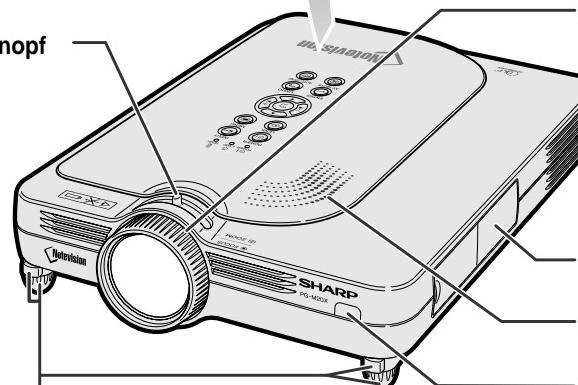
ENTER-Taste

Für die Einstellung der gewählten oder eingestellten Menüpunkte.

AV MUTE-Taste

Für das vorübergehende Ausschalten des Tons und des Bildes.

Zoom-Knopf



Fußentriegelungen/ Einstellfuß

Für das Einstellen der Projektorhöhe.

TEMP.-Anzeige (Temperaturwarn)

Leuchtet normalerweise grün. Wenn die interne Temperatur ansteigt, leuchtet diese Anzeige rot.

INPUT-Taste

Für das Umschalten zwischen Eingangsmodus 1, 2 und 3.

MENU-Taste

Für die Anzeige des Justierungs- und Einstellungsbildschirms.

VOL-Tasten

Für das Einstellen des Lautsprecher-Tonpegels.

UNDO-Taste

Für das Rückgängigmachen eines Bedienschrittes oder für die Rückkehr zu den Grundeinstellungen.

AUTO SYNC-Taste

Für das automatische Einstellen von Bildern, wenn ein Computer angeschlossen ist.

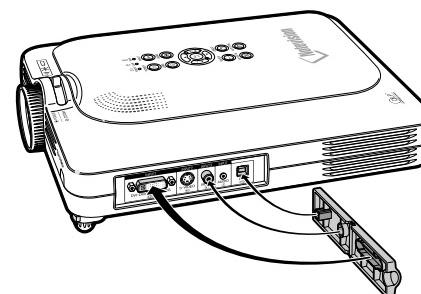
Fokusring

Anschlussabdeckung

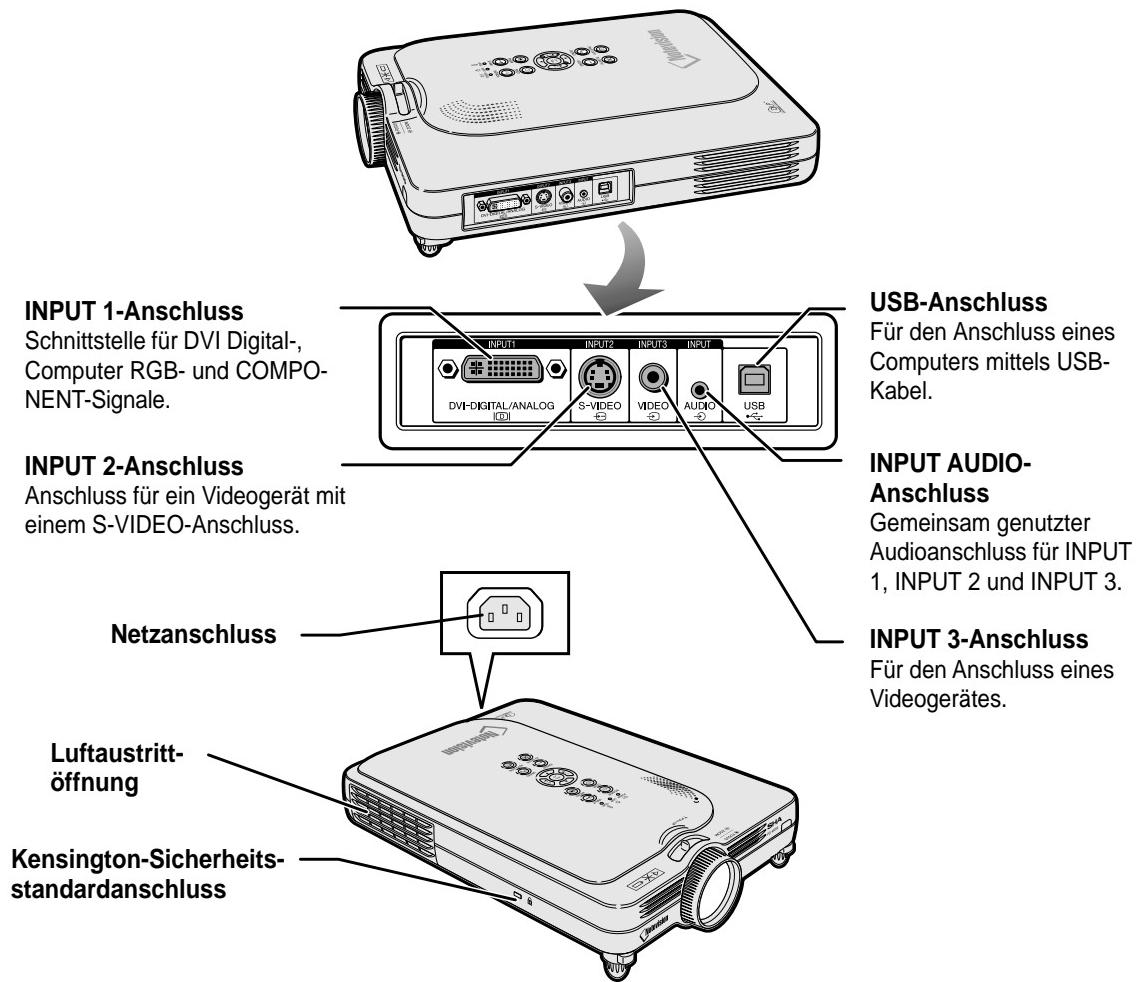
Lautsprecher

Fernbedienungssensor

Befestigen der Anschlussabdeckung
Die Anschlussabdeckung an der Projektorseite befestigen und eindrücken, wie in der Abbildung gezeigt.



Projektor (Seitenansicht)

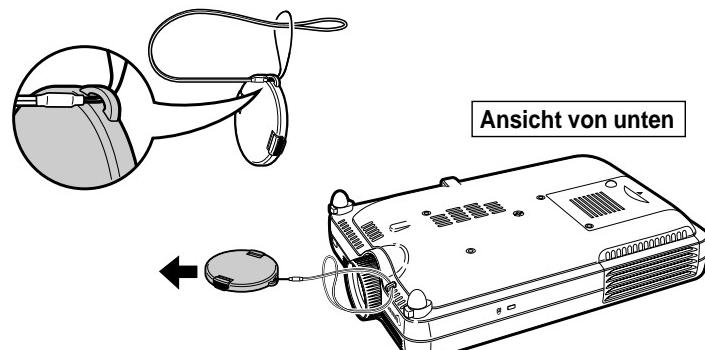


Verwendung der Kensington-Sperre

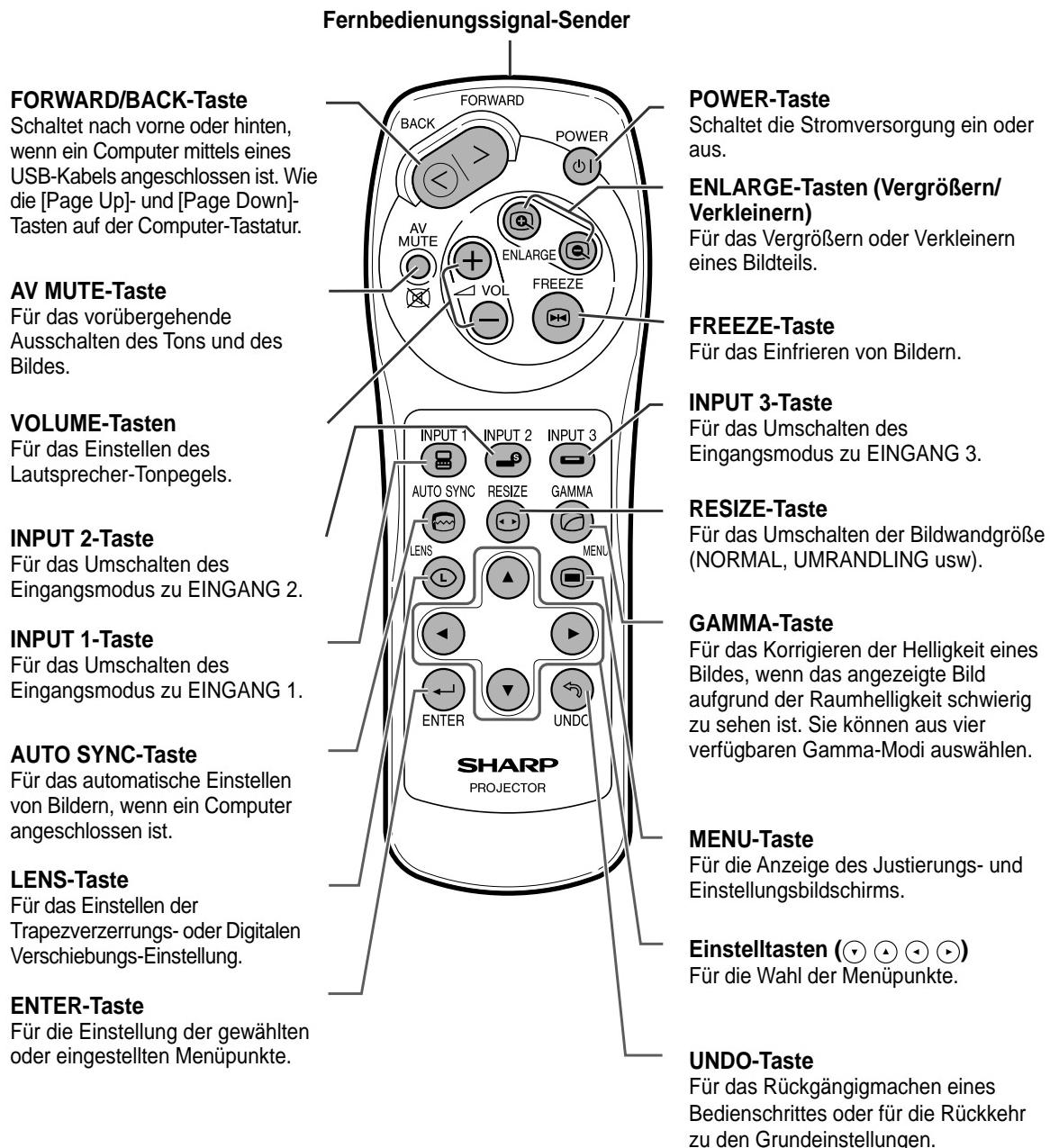
- Dieser Projektor ist mit einem Kensington-Sicherheitsstandardanschluss für die Verwendung des Kensington MicroSaver Sicherheitssystem ausgestattet. Lesen Sie hinsichtlich der Verwendung die Informationen, die dem System beiliegen, um den Projektor zu sichern.

Befestigen der Objektivkappe

Nach dem Befestigen des Riemens an der Objektivkappe das andere Ende des Riemens durch das Loch unter dem Projektor neben dem Objektiv hindurch führen, wie in der Abbildung gezeigt.

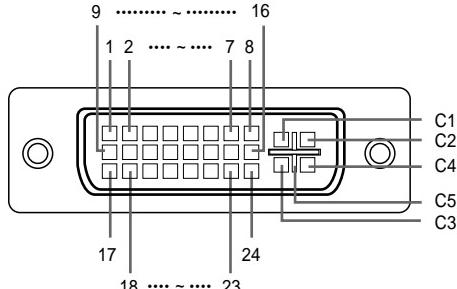


Fernbedienung



Pin-Belegung

DVI Digital-Analog-EINGANG 1-Port: 29 Pin-Anschluss



• DVI-Digital-EINGANG

Pin-Nr.	Signal	Pin-Nr.	Signal
1	T.M.D.S-Daten 2-	16	Hot Plug festgestellt
2	T.M.D.S-Daten 2+	17	T.M.D.S-Daten 0-
3	T.M.D.S-Daten 2 Abschirmung	18	T.M.D.S-Daten 0+
4	Nicht angeschlossen	19	T.M.D.S-Daten 0 Abschirmung
5	Nicht angeschlossen	20	Nicht angeschlossen
6	DDC-Taktgeber	21	Nicht angeschlossen
7	DDC-Daten	22	T.M.D.S-Taktgeber Abschirmung
8	Nicht angeschlossen	23	T.M.D.S-Taktgeber+
9	T.M.D.S-Daten 1-	24	T.M.D.S-Taktgeber-
10	T.M.D.S-Daten 1+	C1	Nicht angeschlossen
11	T.M.D.S-Daten 1 Abschirmung	C2	Nicht angeschlossen
12	Nicht angeschlossen	C3	Nicht angeschlossen
13	Nicht angeschlossen	C4	Nicht angeschlossen
14	+5V-Stromversorgung	C5	Masse
15	Masse		

• DVI-Analog-RGB-Eingang

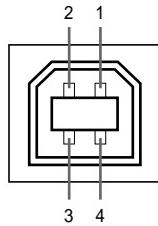
Pin-Nr.	Signal	Pin-Nr.	Signal
1	Nicht angeschlossen	16	Hot Plug festgestellt
2	Nicht angeschlossen	17	Nicht angeschlossen
3	Nicht angeschlossen	18	Nicht angeschlossen
4	Nicht angeschlossen	19	Nicht angeschlossen
5	Nicht angeschlossen	20	Nicht angeschlossen
6	DDC-Taktgeber	21	Nicht angeschlossen
7	DDC-Daten	22	Nicht angeschlossen
8	Vertikales Sync.	23	Nicht angeschlossen
9	Nicht angeschlossen	24	Nicht angeschlossen
10	Nicht angeschlossen	C1	Analogeingang Rot
11	Nicht angeschlossen	C2	Analogeingang Grün
12	Nicht angeschlossen	C3	Analogeingang Blau
13	Nicht angeschlossen	C4	Horizontales Sync.
14	+5V-Stromversorgung	C5	Masse
15	Masse		

• DVI-Analog-Komponenten-Eingang

Pin-Nr.	Signal	Pin-Nr.	Signal
1	Nicht angeschlossen	16	Nicht angeschlossen
2	Nicht angeschlossen	17	Nicht angeschlossen
3	Nicht angeschlossen	18	Nicht angeschlossen
4	Nicht angeschlossen	19	Nicht angeschlossen
5	Nicht angeschlossen	20	Nicht angeschlossen
6	Nicht angeschlossen	21	Nicht angeschlossen
7	Nicht angeschlossen	22	Nicht angeschlossen
8	Nicht angeschlossen	23	Nicht angeschlossen
9	Nicht angeschlossen	24	Nicht angeschlossen
10	Nicht angeschlossen	C1	Analogeingang Pr/Cr
11	Nicht angeschlossen	C2	Analogeingang Y
12	Nicht angeschlossen	C3	Analogeingang Pb/Cb
13	Nicht angeschlossen	C4	Nicht angeschlossen
14	Nicht angeschlossen	C5	Masse
15	Masse		

4-Pin-USB-Anschluss

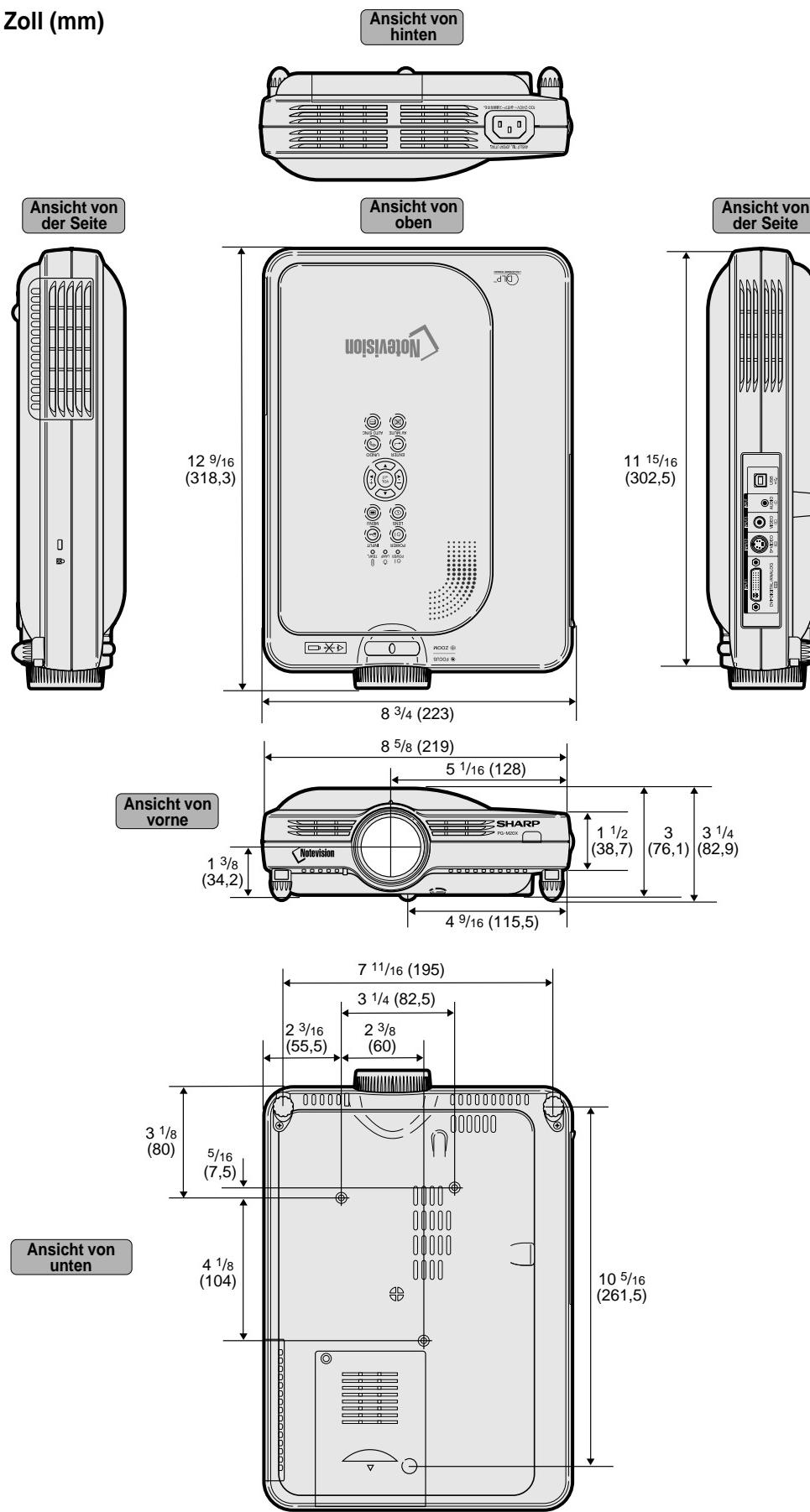
• USB-Anschluss: 4 Pin B-Typ USB-Anschluss



Pin Nr.	Signal	Bezeichnung
1	VCC	USB-Strom
2	USB-	USB-Daten-
3	USB+	USB-Daten+
4	SG	Signal-Masse

Abmessungen

Einheiten: Zoll (mm)



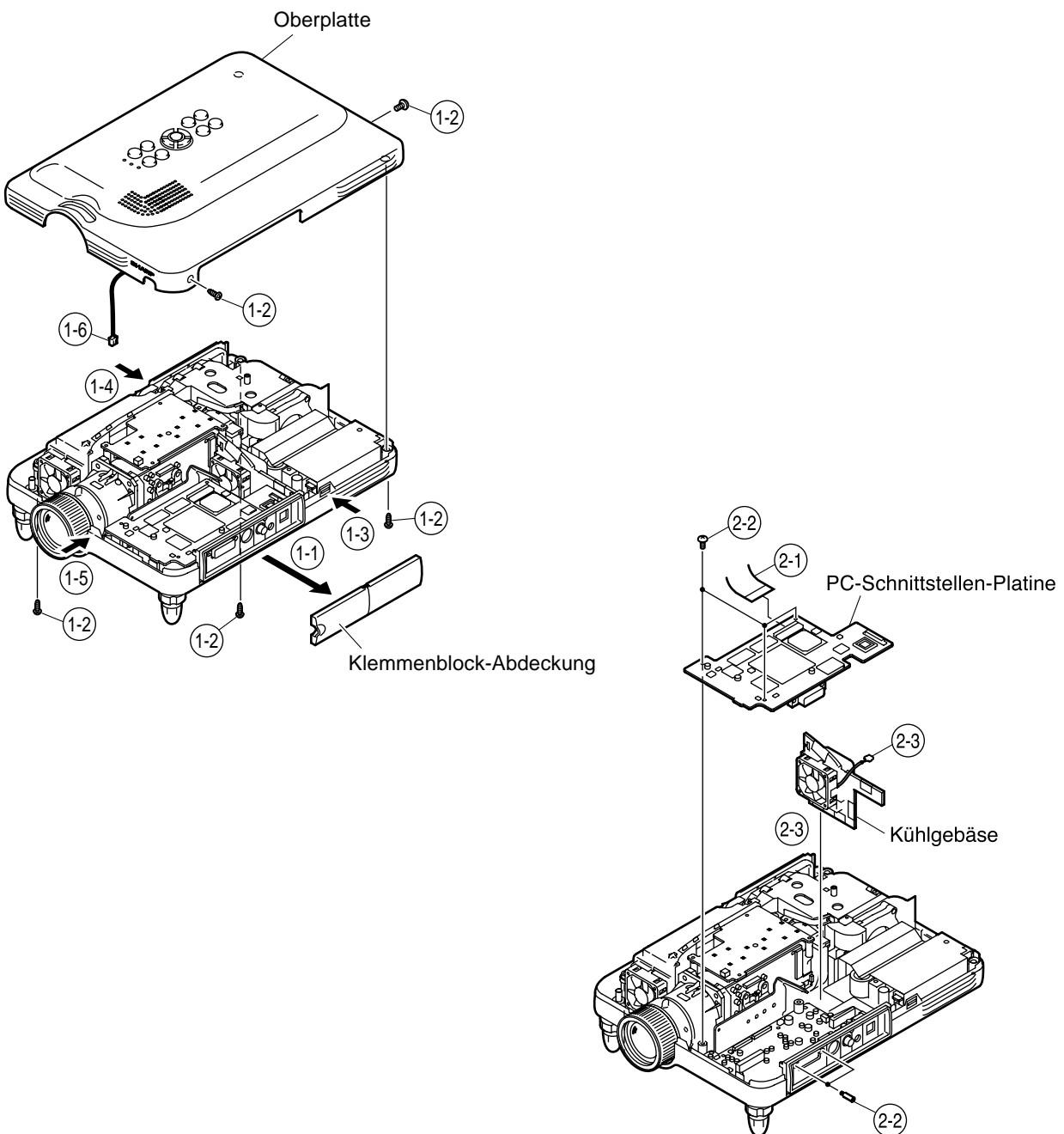
ENTFERNEN DER HAUPTTEILE

1. Ausbau der Oberabdeckung

- 1-1. Die Klemmenblock-Abdeckung entfernen.
- 1-2. Die fünf Sperrschauben von der Oberabdeckung entfernen.
- 1-3. Die rechte Seite des Unterteils drücken, um den Haken zu lösen.
- 1-4. Die linke Seite des Unterteils drücken, um den Haken zu lösen.
- 1-5. Die vordere Seite des Unterteils drücken, um den Haken zu lösen. Die Oberplatte vom Unterteil lösen.
- 1-6. Leicht die Vorderseite der Oberplatte anheben, und den Lautsprecher-Steckverbinder abtrennen.

2. Ausbau der PC-Schnittstellen-Platine und des Kühlgeblöses

- 2-1. Den Steckverbinder abtrennen.
- 2-2. Die drei Sperrschauben von der PC-Schnittstellen-Platine entfernen, und dann die beiden Sechskant-Halteschrauben entfernen.
- 2-3. Den Steckverbinder abtrennen, und das Kühlgeblöse herausnehmen.

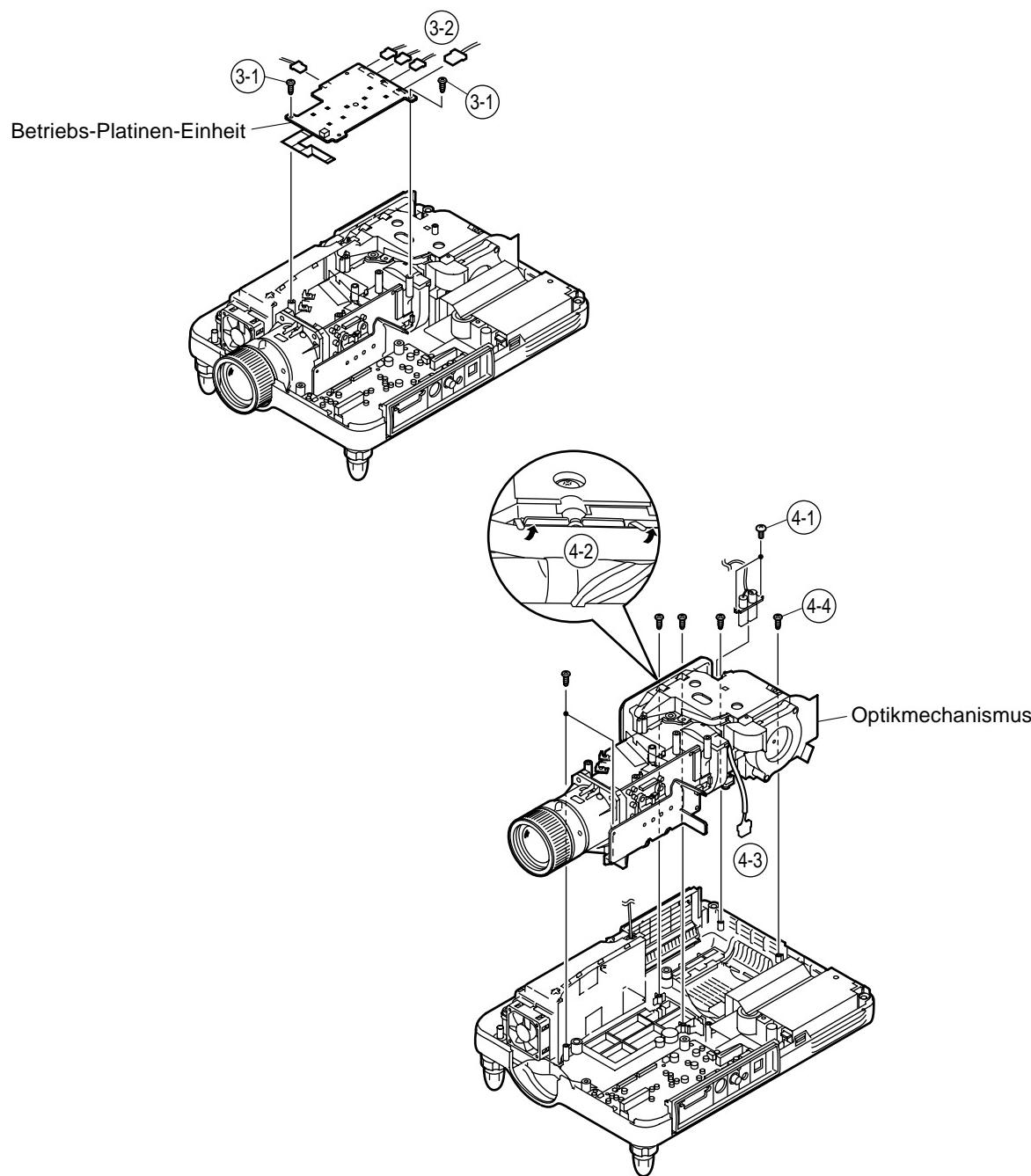


3. Ausbau der Betriebs-Platine

- 3-1. Die zwei Sperrschauben von der Betriebs-Platine entfernen, und dann die Platine leicht anheben.
- 3-2. Die Steckverbinder abtrennen.

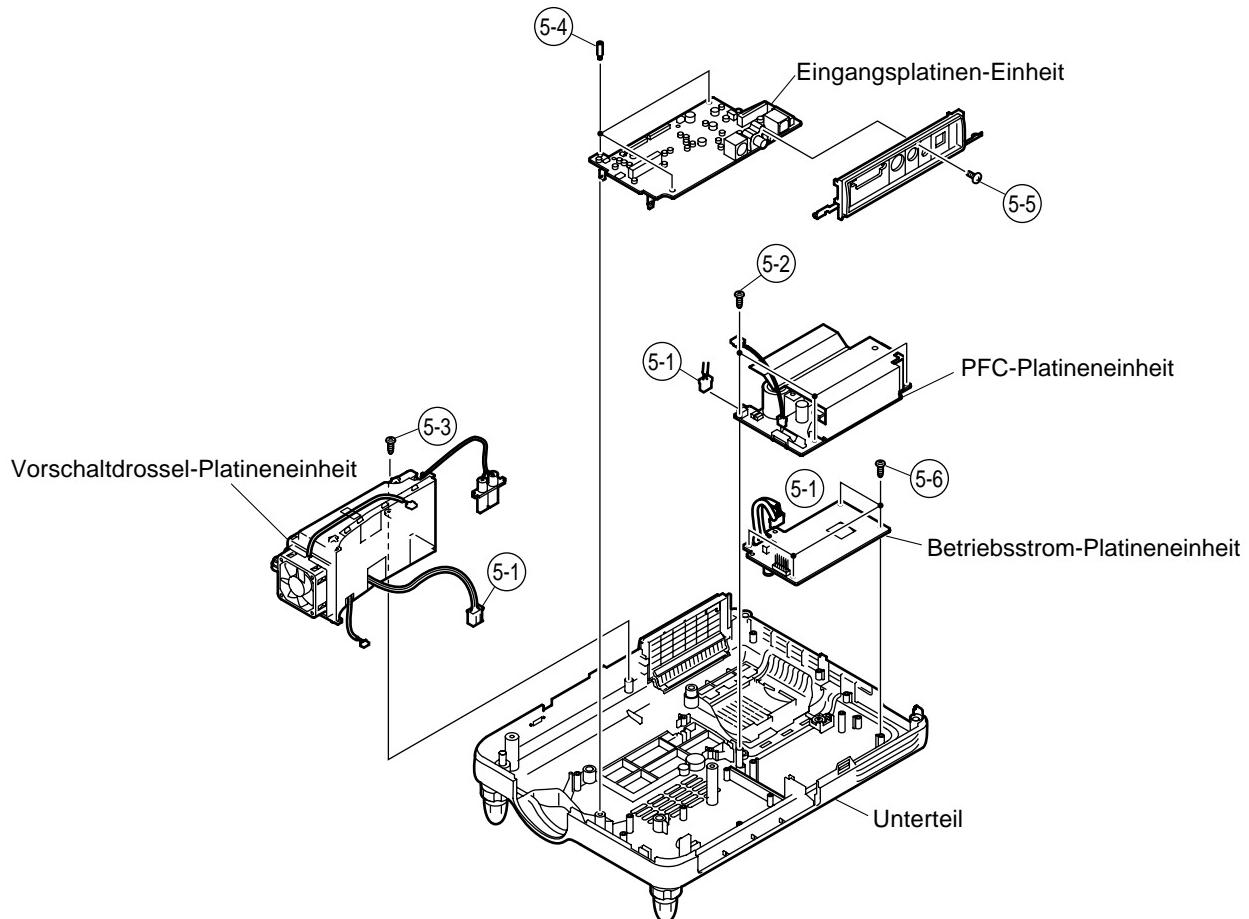
4. Ausbau des Optikmechanismus

- 4-1. Die beiden Sperrschauben von der Lampenfassung entfernen.
- 4-2. Die beiden Lampenfassungs-Leitungsbefestigungen anheben.
- 4-3. Die Steckverbinder abtrennen.
- 4-4. Die sechs Sperrschauben vom Optikmechanismus entfernen.



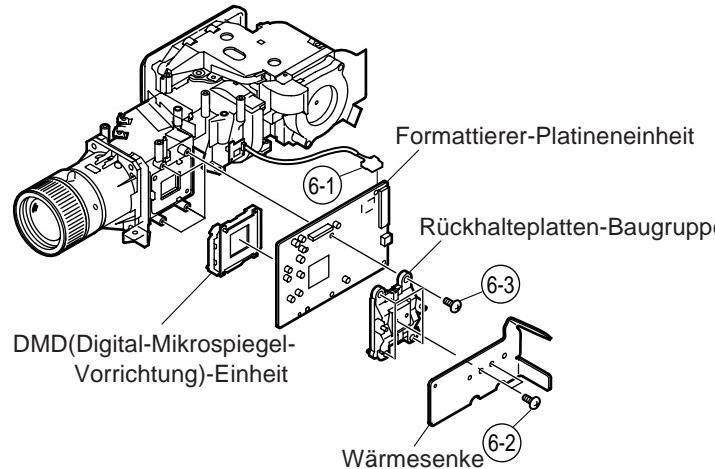
5. Ausbau der anderen Platinen

- 5-1. Die Steckverbinder abtrennen.
- 5-2. Die vier Sperrschauben von der Betriebsstrom-Platine entfernen.
- 5-3. Die Sperrschiabe von der Vorschaltdrossel-Platineneinheit entfernen.
- 5-4. Die drei Sechskant-Halteschrauben von der Eingangsplatine entfernen.
- 5-5. Die Sperrschiabe von der Klemmenblock-Abdeckung entfernen.
- 5-6. Die drei Sperrschauben von der PFC-Platine entfernen.



6. Ausbau der Formatierer-Platine

- 6-1. Die Steckverbinder abtrennen.
- 6-2. Die beiden Sperrschauben von der Wärmesenke entfernen.
- 6-3. Die vier Sperrschauben von der Rückhalteplatten-Bügel entfernen, und die Formatierer-Platine abnehmen.
Hinweis: Die DMD(Digital-Mikrospiegel-Vorrichtung)-Einheit wird leicht durch statische Elektrizität beeinflusst. Beim Umgang mit diesem Gerät immer ein statikableitendes Armband tragen oder andere Maßnahmen gegen Statik treffen.



Vorsichtsmaßregeln zur Auswechslung des DMD (Digital-Mikrospiegel-Vorrichtung) -Chips

Hinweis: Sicherstellen, daß sich keine Staube und Fingerabdrücke auf dem Deckglas des DMD-Chips und der Prismen-Oberfläche des Optikapparats zurücklassen.

1. Beim Festziehen der 4 Schrauben der Rückhalteplatten-Baugruppe die Rückhalteplatte auf die Formatier-Platine niederdrücken und die Schrauben diagonal festziehen.
2. Falls ein Schatten auf dem Projektionsschirm erscheint, wie in der Abbildung 1, die beide Schrauben von der Spiegeleinstellplatte lockern und diese Platte bewegen, um das Leuchtfeld des DMD-Chips einzustellen.

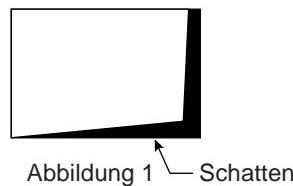
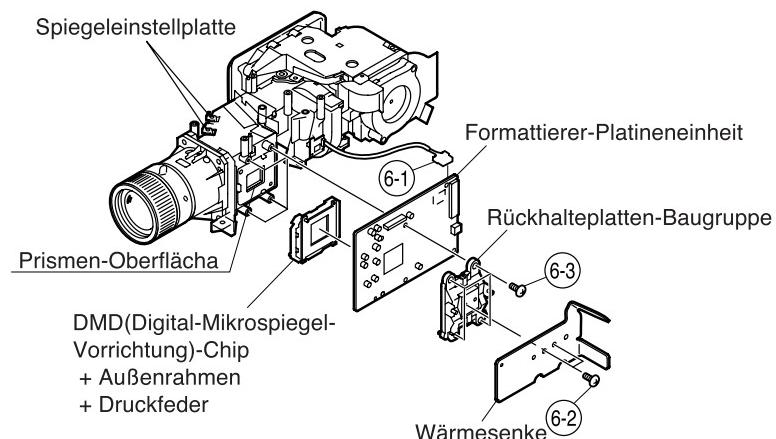
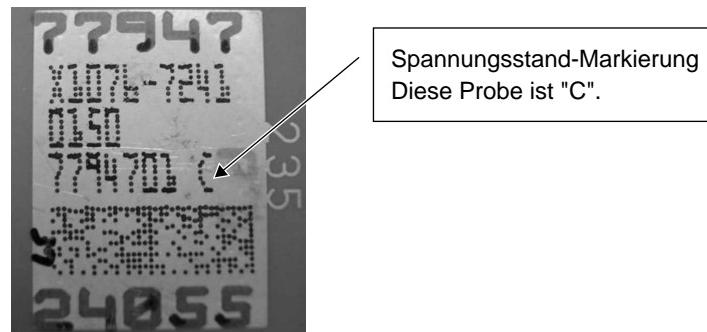


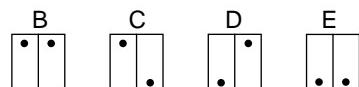
Abbildung 1 — Schatten

*** Vorsichtsmaßregeln zur Einrichtung der DMD(Digital-Mikrospiegel-Vorrichtung)-Einheit**

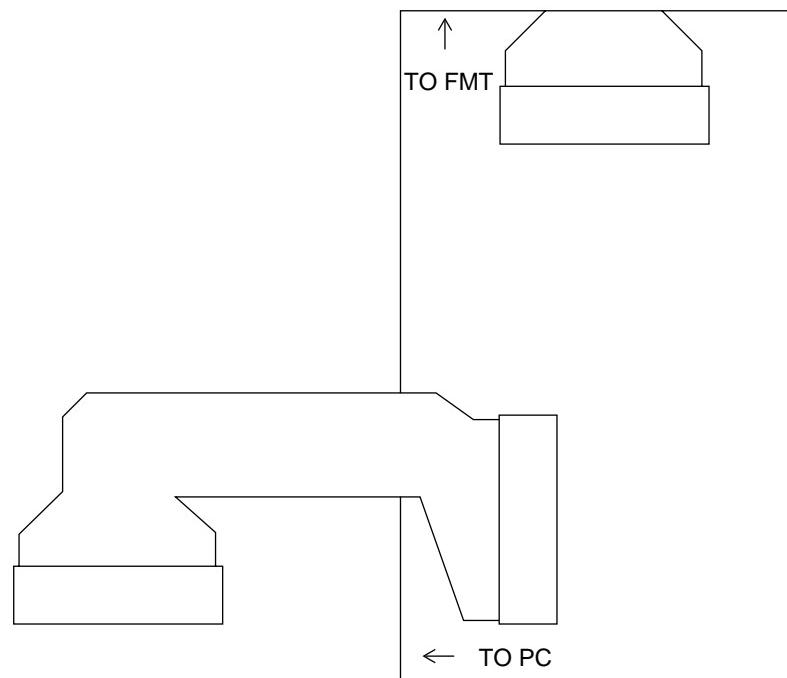
Vor dem Anschließen der Formatierer-Platine an den Optikapparat die folgenden Schritte ausführen. Die Spannungsrang-Markierung am DMD selber prüfen. Entsprechend dieser Markierung die DIP-Schalter an der Formatier-Platine einstellen. Danach diese Platine an den Optikapparat anschließen. Falsche Einstellungen beeinträchtigen die Systemleistung.



Spannungsrangsystem mit den DIP-Schaltern an der Formatier-Platine

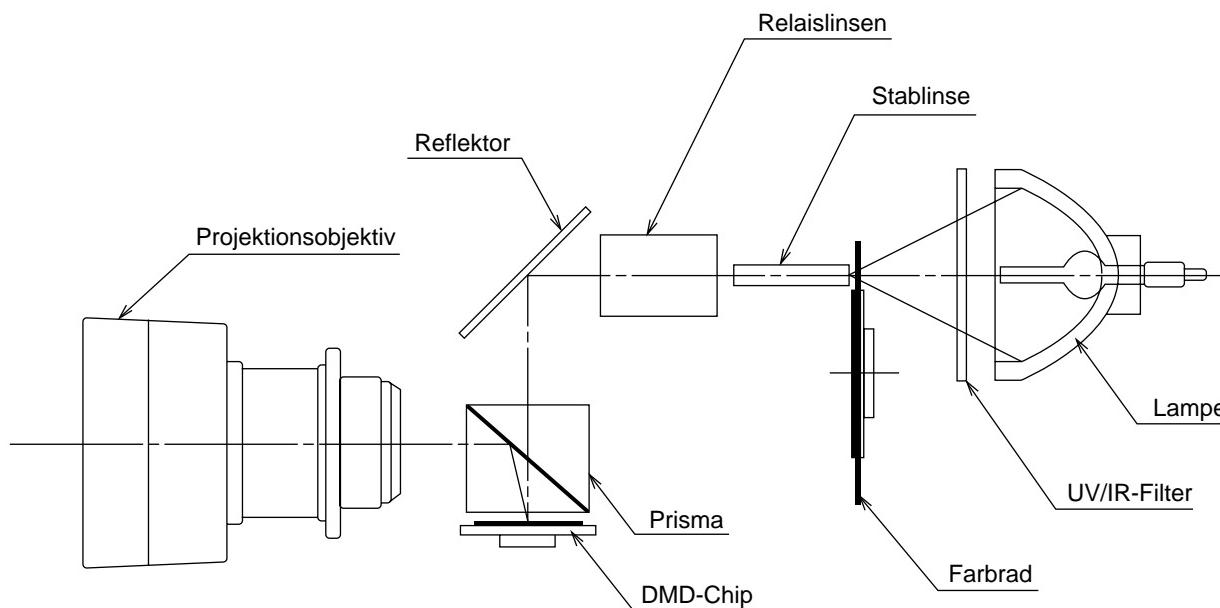
*** Anschluss der FPC-Verlängerungskabel (QCNW-A298WJZZ)**

Die Kabel an die Formatierer-Platine (TO FMT) und die PC-Schnittstellenplatine (TO PC) entsprechend den Schablonendruck-Markierungen anschließen. Siehe Skizze unten. (Die FPC ist bereits an TO PC angeschlossen.)



Kurzbeschreibung des Optikapparats

<Layout>



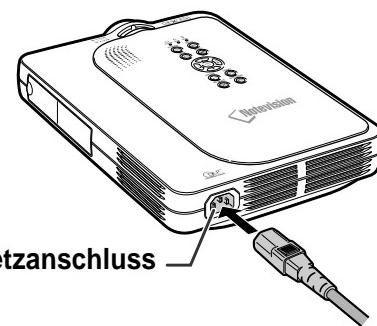
Gegenstand	Funktion
Lampe	Lichtquelle. Gleichstrombetriebene Hochdruck-Quecksilberdampflampe.
UV/IR-Filter	Zur Absorption von Ultraviolett- und Infrarotstrahlen.
Farbrad	Dient zum Durchlassen der Lichtquelle durch den Farbfilter und Aufspalten in die Farben R, G und B.
Stablinse	Dient zur Erzeugung uniformer Lichtstrahlen.
Relaislinsen	Dienen zum Sammeln des Lichts von der Stablinse in den DMD-Chip.
Reflektor	Dient zum Reflektieren des Lichts von der Relaislinse gegen den DMD-Chip.
Prism	Dient zum Einführen des Lichts vom Reflektor über die Effektivoberfläche des DMD-Chips. Wenn der Mikrospiegel gekippt wird (EIN) wie vorgeschrieben, wird das reflektierte Licht zur Projektionslinse geführt.
DMD-Chip	Dient zum Einschalten und Ausschalten des Mikrospiegels als Reaktion auf das Verhältnis der Farbkomponenten bei jedem Punkt und deshalb zur entsprechenden Reflektion des einfallenden Lichts.
Projektionsobjektiv	Dient zum Vergrößern des Lichts vom DMD-Chip und zur Projektion des Lichts auf den Schirm.

RÜCKSTELLUNG DES LAMPEN-TIMERS

Den Lampen-Timer nach dem Lampenaustausch zurückzustellen.

1 Das Netzkabel anschließen.

- Das Netzkabel am Netzanschluss des Projektors anschließen.



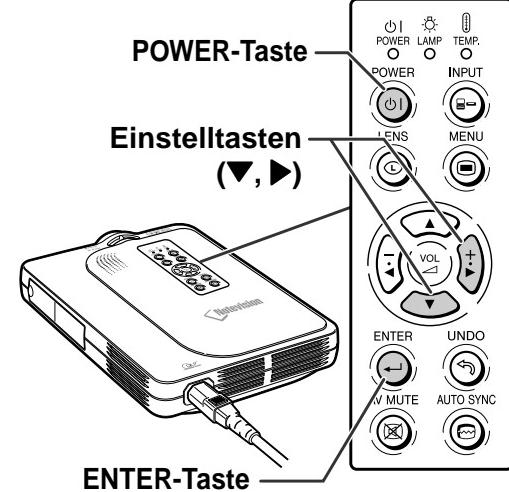
2 Den Lampen-Timer zurückstellen.

- Während und auf dem Projektor gleichzeitig gedrückt wird, auf dem Projektor drücken.
POWER
- “LAMPE 0000H” erscheint und zeigt damit an, dass der Lampen-Timer zurückgestellt ist.



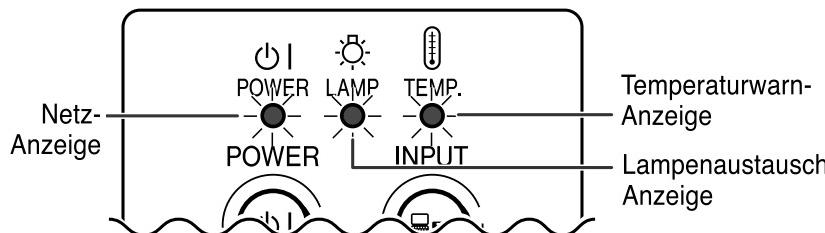
Info

- Stellen Sie sicher, dass Sie den Lampen-Timer nur nach dem Austausch der Lampe zurücksetzen. Wenn Sie den Lampen-Timer zurücksetzen und dieselbe Lampe weiterhin verwenden, könnte die Lampe beschädigt werden oder explodieren.



WARTUNGSANZEIGEN

- Die Warnleuchten auf dem Projektor weisen auf Fehlfunktionen im Projektor hin.
- Falls ein Problem auftritt, leuchtet entweder die Temperaturwarn-Anzeige oder die Lampenaustausch-Anzeige rot auf und die Stromversorgung wird ausgeschaltet. Nach dem Ausschalten des Gerätes den unten aufgeführten Schritten folgen.



Über die Temperaturwarn-Anzeige

Wenn der Projektor wegen Problemen bei der Aufstellung oder wegen Blockierens der Luftöffnungen zu warm wird, blinkt "TEMP." in der unteren linken Ecke des Bildes. Wenn die Temperatur weiter ansteigt, schaltet sich die Lampe aus und die Temperaturwarn-Anzeige blinkt; der Kühlventilator dreht sich für weitere 90 Sekunden und anschließend wird die Stromversorgung ausgeschaltet. Nachdem "TEMP." angezeigt wird, unbedingt die folgenden Maßnahmen durchführen.



Über die Lampenaustausch-Anzeige

■ Wenn die Lampe 1.900 Betriebsstunden überschreitet, blinkt "LAMP." auf der Bildwand gelb auf. Wenn 2.000 Betriebsstunden erreicht werden, wird "LAMP." rot angezeigt, und die Lampe sowie der Projektor werden automatisch ausgeschaltet. Gleichzeitig leuchtet die Lampenaustausch-Anzeige rot auf.



■ Nachdem Sie zum vierten Mal versucht haben den Projektor einzuschalten, ohne dass die Lampe ausgetauscht wurde, kann der Projektor nicht mehr eingeschaltet werden.

Wartungsanzeige			Symptom	Problem	Abhilfe
Temperatur- warn- Anzeige	Normal	Unnormal	Die Temperatur im Inneren des Gerätes ist zu hoch.	<ul style="list-style-type: none"> • Belüftungsöffnungen blockiert. • Kühlventilator beschädigt • Interne Schaltkreise beschädigt • Luftfilter verstopft 	<ul style="list-style-type: none"> • Den Projektor an einem besser belüfteten Ort aufstellen. • Den Projektor einem von Sharp autorisierten Händler für Projektoren oder dem Kundendienst zur Reparatur geben.
	Aus	Rot ein/ Strom aus			
Lampenaus- tausch- Anzeige	Grün ein Grün blinkt, wenn die Lampe aktiviert ist.	Rot blinkt	Die Lampe muss ausgetauscht werden	<ul style="list-style-type: none"> • Die Lampenbetriebsdauer liegt bei über 1900 Stunden. 	<ul style="list-style-type: none"> • Den Projektor einem von Sharp autorisierten Händler für Projektoren oder dem Kundendienst zur Reparatur oder zum Lampenaustausch geben. • Lassen Sie beim Austausch der Lampe bitte die nötige Vorsicht walten.
		Rot ein/ Strom aus	Die Lampe leuchtet nicht.	<ul style="list-style-type: none"> • Ausgebrannte Lampe • Lampen-Schaltkreis beschädigt 	

Freigabe der Systemsperre

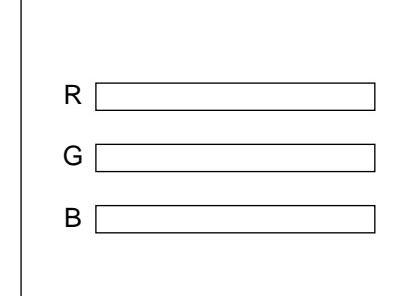
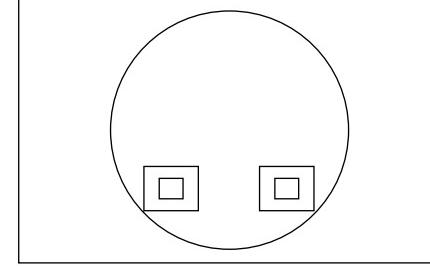
Das Gerät einschalten. Wenn die Systemsperre aktiviert wird, erscheint die System-Nullstellungsanzeige. Danach sind die folgenden Tasten in der vorgeschriebenen Reihenfolge zu betätigen.

MENU → ENTER → ENTER → MENU → UNDO → UNDO → MENU



Zuerst die MENU-Taste drücken, dann die verbleibenden Tasten innerhalb von 10 Sekunden betätigen.

ELEKTRISCH EINSTELLUNG

Nr.	Einstellposten	Einstellbedingungen	Einstellverfahren
1	Initialisierung des EEPROM	1. Das Gerät einschalten (Lampe leuchtet auf) und das System für 15 Minuten aufwärmen lassen.	1. Folgende Einstellungen ausführen. SW200 drücken, um in den Prozeßmodus einzutreten, dann S2 im SSS-Menü ausführen.
2	Einstellung für CW-Index	1. Signaleingang: Farbbalken mit 64 Abstufungen 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: DLP Posten: CW-INDEX anwählen.	1. Das Signal zu INPUT 1 leiten. 2. Den Posten anwählen und Einstellungen vornehmen, so daß die Lampen-Abstufungsmuster von R, G und B weich und störungsfrei erscheinen. 
3	Einstellung der Reproduktion für die RGB-Abstufung	1. Das SMPTE-Mustersignal zuführen. 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: DLP Posten: G1-GAIN	1. Sicherstellen, daß 100% und 95% Weißabstufung sowie 0% und 5% Schwarzabstufung erkennbar sind. 2. Falls die Weißabstufung unterschiedlich erscheint, muß die Feineinstellung durch G1-GAIN erfolgen. 
4	Einstellung für Video/Helligkeitskontrast	1. Das Fenster-Mustersignal (NTSC100%) zuführen (Burst-Signal) 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: VIDEO Posten: AUTO	1. Nach der Signalzuführung ist "AUTO" mit dem Geräteschalter oder der Taste für die automatische Einstellung auf der Fernbedienung anzuwählen.
5	Einstellung auf Video-Farnton	1. Das Farb-Trennsignal zuführen. 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: VIDEO Posten: TINT	1. Den festgelegten Wert bestätigen. Festgelegter Wert: 128

Nr.	Einstellposten	Einstellbedingungen	Einstellverfahren
6	Einstellung der NTSC-Farbsättigung	1. Das interne 8-Kanal-Trennsignal zuführen. 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: VIDEO Posten: N-COLOR	1. Den festgelegten Wert bestätigen. Festgelegter Wert: 59
7	Einstellung der PAL-Farbsättigung	1. Das PAL-Farbbalkensignal zuführen. 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: VIDEO Posten: P-COLOR	1. Den festgelegten Wert bestätigen. Festgelegter Wert: 59
8	Einstellung der SECAM-Farbsättigung	1. Das SECAM-Farbbalkensignal zuführen. 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: VIDEO Posten: S-COLOR	1. Den festgelegten Wert bestätigen. Festgelegter Wert: 59
9	Einstellung der COMPO G-Helligkeit	1. Eingangssignal: 0% Graumustersignal (480I) 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: COMPO Posten: G-BRIGHT	1. Das Signal zu INPUT 1 leiten. Die Einstellung so vornehmen, daß einige Bits im Bild fehlen.
10	Einstellung für COMPO CR-Offset	1. Das Farbdifferenzsignal (480I) zuführen: Y 0% Helligkeit, Cb und Cr 0% Helligkeit Gruppe: COMPO Posten: AUTO	1. Nach der Signalzuführung ist "AUTO" mit dem Geräteschalter oder der Taste für die automatische Einstellung auf der Fernbedienung anzuwählen.
11	Automatische Einstellung der RGB-Weißbalance	1. Das Grau-Mustersignal (50%) zuführen (XGA, 60 Hz:PG-M20X/ SVGA,60 Hz:PG-M20S). 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: DLP Posten: R1-GAIN (Rot) B1-GAIN (Blau)	1. R-1 GAIN und B1-GAIN so einstellen, daß der x-Wert 266 ± 3 und der y-Wert 320 ± 3 beträgt.
12	Automatische Einstellung der SRGB-Weißbalance	1. Das Grau-Mustersignal (50%) zuführen (XGA, 60 Hz:PG-M20X/ SVGA,60 Hz:PG-M20S). 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: DLP Posten: S-R1-GAIN (Rot) S-G1-GAIN (Grün) S-B1-GAIN (Blau)	1. Den Wert S-R1-GAIN auf 34 einstellen. 2. S-G1-GAIN und S-B1-GAIN so einstellen, daß der x-Wert 310 ± 3 und der y-Wert 335 ± 3 beträgt.

Nr.	Einstellposten	Einstellbedingungen	Einstellverfahren
13	Automatische Einstellung der Video-Weißbalance	1. Das Grau-Mustersignal (50%) zuführen (NTSC, Burst-Signal). 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: DLP Posten: V-R1-GAIN (Rot) V-B1-GAIN (Blau)	1. V-G1-1 GAIN und V-B1-GAIN so einstellen, daß der x-Wert 265 ± 3 und der y-Wert 298 ± 3 beträgt.
14	Automatische Einstellung der DTV-Weißbalance	1. Das Grau-Mustersignal (50%) zuführen (480I, Farbdifferenzsignal). 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: DLP Posten: C-R1-GAIN C-B1-GAIN	1. C-R1-GAIN und C-B1-GAIN so einstellen, daß der x-Wert 263 ± 3 und der y-Wert 295 ± 3 beträgt.
15	Einstellung der DLP-Spannung (für Referenz)	1. Den Spannungsbereich der DLP-Beschreibung lesen. 2. Den Schalter gemäß dem abgelesenen Bereich einstellen (auf der Formatierungsplatine).	1. Die Einstellung durchführen, wenn der DLP-Chip ausgewechselt oder die Chip-/Formatiererkombination verändert wurde. 2. Reihe: B C D E Einstellwert: 1 2 3 4
16	Bestätigung und Neueinstellung der Weißbalance	1. Die Einstellbedingungen für jeden einzelnen Posten sind wie folgt: Für RGB-Eingang auf Posten 13-1 Bezug nehmen. Für SRGB-Eingang auf Posten 13-2 Bezug nehmen. Für Videoeingang auf Posten 13-3 Bezug nehmen Für DVT-Eingang auf Posten 13-1 Bezug nehmen.	Sicherstellen, daß keine Abweichung in der Weißbalance auftritt (verglichen mit der Überwachungseinrichtung). Für die Neueinstellung in der folgenden Reihenfolge vorgehen: RGB-Eingang, Videoeingang und DTV-Eingang.
17	Bestätigung der farbbezogenen Operation	1. Das Farbbildsignal empfangen.	1. L1 im Prozeßmodus empfangen. Die Leistung von Farbe und Tönung überprüfen.
18	Bestätigung der farbbezogenen Operation	1. Das Monoskop-Mustersignal empfangen.	1. L2 im Prozeßmodus empfangen. Das Bild, die Bildhelligkeit und die Bildschärfe überprüfen.
19	Bestätigung von RGB	1. Das RGB-Signal empfangen.	1. L4 im Prozeßmodus anwählen. Folgendes überprüfen: Bild, Bildhelligkeit, Rot, Blau, Takt, Phase, H-POS und V-POS.
20	Bestätigung des Off-Timer-Betriebs		1. OFF im Prozeßmodus anwählen. Sicherstellen, daß der Off-Timer mit einer 5minütigen Anzeige beginnt, 1 Minute für 1 Sekunde zählt und dann ausschaltet, nachdem die Minute "0" angezeigt wird.
21	Bestätigung des Thermistorbetriebs	1. Den Thermistor mit einem Haarfön erwärmen.	1. Sicherstellen, daß die Temperatur angezeigt wird.

Nr.	Einstellposten	Einstellbedingungen	Einstellverfahren				
22	Automatischer Synchronisationsbetrieb	1. Das Phasen-Prüfmustersignal empfangen.	1. Sicherstellen, daß Takt, Phase, H-POS und V-POS automatisch im VGA/S-VGA/XGA-Modus eingestellt werden können.				
23	Den USB-Betrieb bestätigen.	Das Gerät via ein USB-Kabel an einen PVC anschließen.	Die Fernbedienung benutzen und sicherstellen, daß der Zuführungs- und Rückführungsbetrieb am Computermonitor effektvoll ist.				
24	Werkseinstellungen		<p>1. Die folgenden Einstellungen durchführen.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Prozeß-Einstellung</td> <td>Fernbedienungseinstellungen</td> </tr> <tr> <td>S4</td> <td>"Werkseinstellung 4"</td> </tr> </table>	Prozeß-Einstellung	Fernbedienungseinstellungen	S4	"Werkseinstellung 4"
Prozeß-Einstellung	Fernbedienungseinstellungen						
S4	"Werkseinstellung 4"						

Einstellung der PC-Platine

1. Initialisierung des EEPROM
 - 1) SW2001 drücken, um in den Prozeßmodus einzutreten.
 - 2) S1 auf dem SSS-Menü ausführen. (Wenn S1 auf dem SSS-Menü ausgeführt wird, wird der Inhalt des EEPROMs initialisiert.)
 - 3) Sicherstellen, daß es sich bei der Version des Programms (Ver. XXX) um die neueste Version handelt.
2. Einstellposten
 - 1) Einstellung für RGB-Betriebs-/Verstärkungsspannung
 - (1) Das Fenster-Mustersignal zuführen, welches 100%- und 0%-Signale aufweist.
 - (2) AUTO unter den Analog-/Digitalposten im Prozeßmodus anwählen und die Einstellung durchführen.

● Eingabe des Einstellprozeßmodus

Es gibt die folgenden zwei Verfahren.

- Den SW2001 an der Tastenplatinen-Einheit drücken.
- Die folgenden Tasten in der vorgeschriebenen Reihenfolge betätigen.

AV MUTE→AV MUTE→Einstell oben→Einstell unten→ENTER→ENTER→MENU



● Einstellmodus-Prozessmenü

Gruppe	Untergruppe	Gegenstand
APC-Bild einstellen	A/D	R-BRIGHT G-BRIGHT B-BRIGHT R-D B-D G-D AD-AUTO
DLP-Bild einstellen	DLP	R1-BLK R1-GAIN G1-BLK G1-GAIN B1-GAIN CW-INDEX S-R1-GAIN S-G1-GAIN S-B1-GAIN C-R1-GAIN C-B1-GAIN V-R1-GAIN V-B1-GAIN
VIDEO-Bild einstellen	VIDEO	PICTURE BRIGHT TINT N-COLOR P-COLOR S-COLOR STAT-GAIN VIDEO-AUTO
Komponenten-Bild einstellen	DTV	G-BRIGHT CB-OFFSET CR-OFFSET COMPO-AUTO
Prozessmodus	LINE	L1 L2 L3 OFF TEMP OFF SENSOR CHECK
ANFANGSEINSTELLUNG	SSS	TIME S1 S2 S3 S4 S5

Gruppe	Untergruppe	Gegenstand
Beispielmuster	PATTERN	RGB RGB(50) CROSS FOCUS SETP COLOR CHR
CVIC einstellen	CVIC-PROGRSSIVE	MODE IP MDSW PTGSW C-TESTSW C-ILG-LY C-MOD-LY C-VE-LV
	CVIC-ENHANCE-VIDE	ENH-PLUS ENH-MINUS DFC
	CVIC-ENHANCE-HTTV	ENH-PLUS ENH-MINUS DFC
	CVIC-ENHANCE-RGB	MODE ENH-GAIN ENH-PLUS
	CVIC-SCREEN	CUBIC-RGB CUBIC-VEDEO
	CVIC-NR	YNR-LEVEL YNR-K YNR-FSEL CNR-LEVEL CNR-K CNR-FSEL CNR-FILSW
	CVIC-PTG	TBL-NO TESTSW ENABLE MV-F VDDTP
	CVIC-CMS	RED YELLOW GREEN CYAN BLUE MAGENTA
Versionsprüfung usw.	CVIC-DEGAMMA	TABLE
	SPECIAL	IPL IPL2 E2PROM ADR RD/WR USB MODE

Wie eine Seriennummer zu schreiben.

Die neueste Version dieses Programms (USB-Seriell-Treiberprogramm) von der Homepage des SHARPs "<http://172.24.145.13/tcg-qrc/prj/prj-e.asp>" herunterladen.

Name: USB to Serial Driver program.

SCHRITT 1

Einrichtung für seriellen USB-Treiber
(Siehe Datei "Treiberinstallationsverfahren und Rat.doc")

SCHRITT 2

Den Einstellprozeßmodus anrufen, und die Untergruppe "SPECIAL" sowie den Einstellposten "USB-MODE" wählen. Den USB MODE-Wert von 0 auf 1 umstellen.
(Für diese Änderung wird Eingabe eines 232C-Befehls möglich.)

SCHRITT 3

Das USB-Kabel zwischen PC und Projektor anschließen.

SCHRITT 4

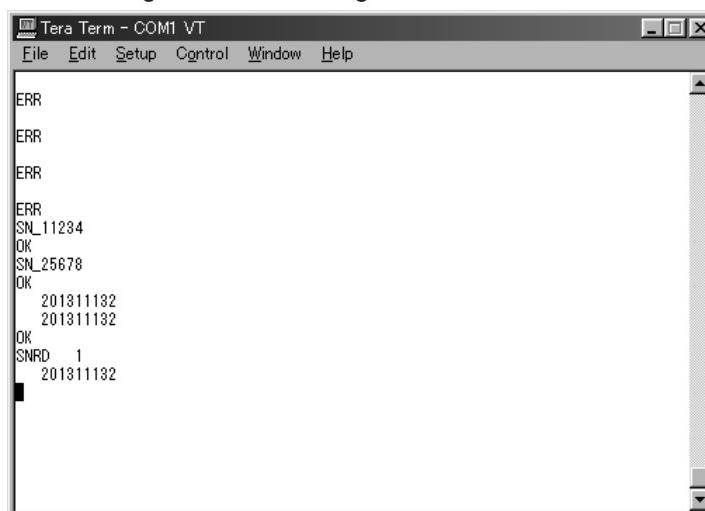
Das Parameter "TeraTerm" ausführen.
(Die Konfigurationsdatei dient zur Verwendung des beiliegenden Teraterm.ini.)

SCHRITT 5

Mit Hilfe der beiliegenden Macro-Datei (serial_write.ttl) beschreiben.
Eine Seriennummer ist in dieser Macro-Datei beschrieben. Diese Nummer eingeben.

SCHRITT 6

Die Meldung erscheint wie folgt.



SCHRITT 7

Bitte TeraTerm beenden.

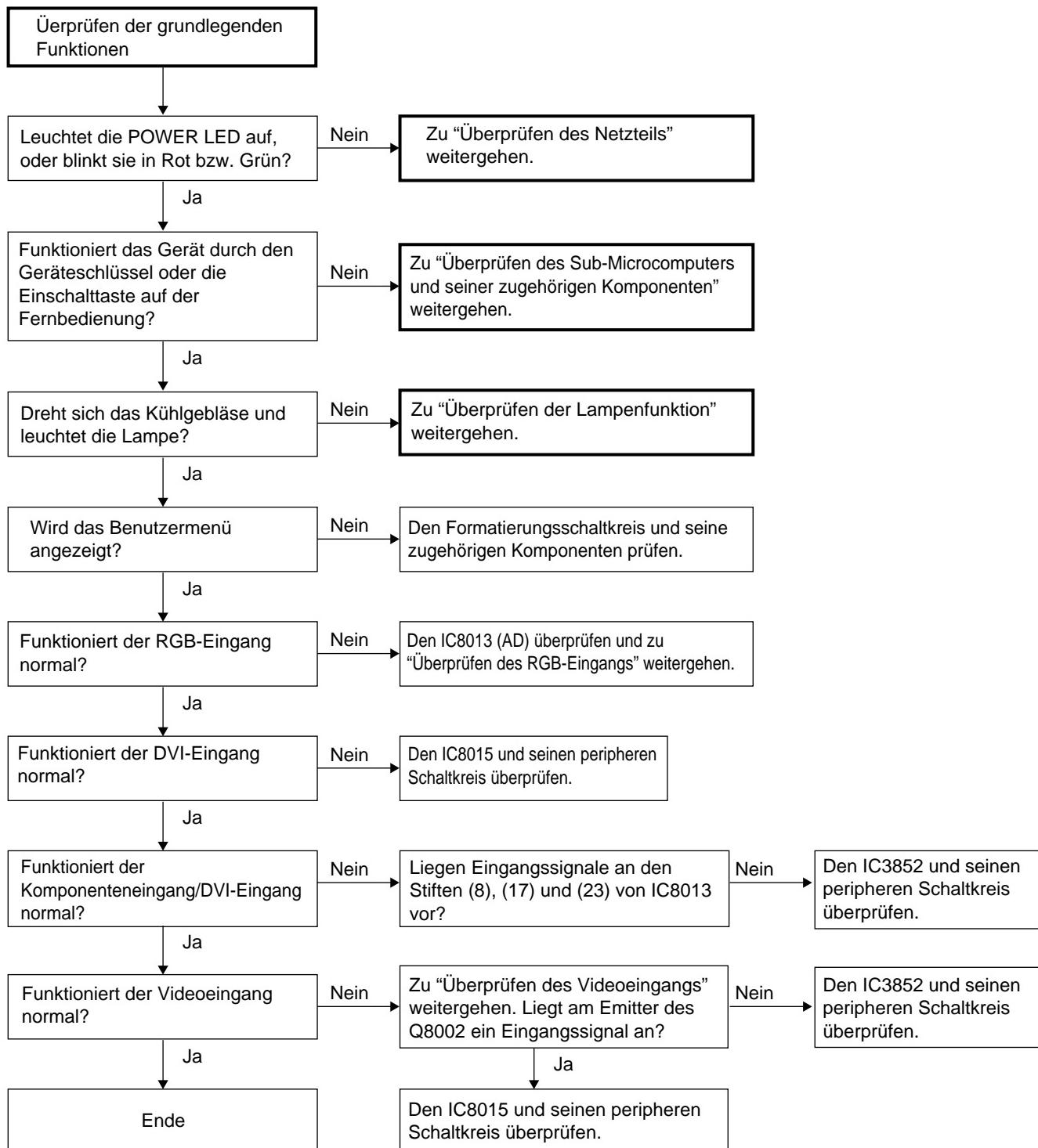
SCHRITT 8

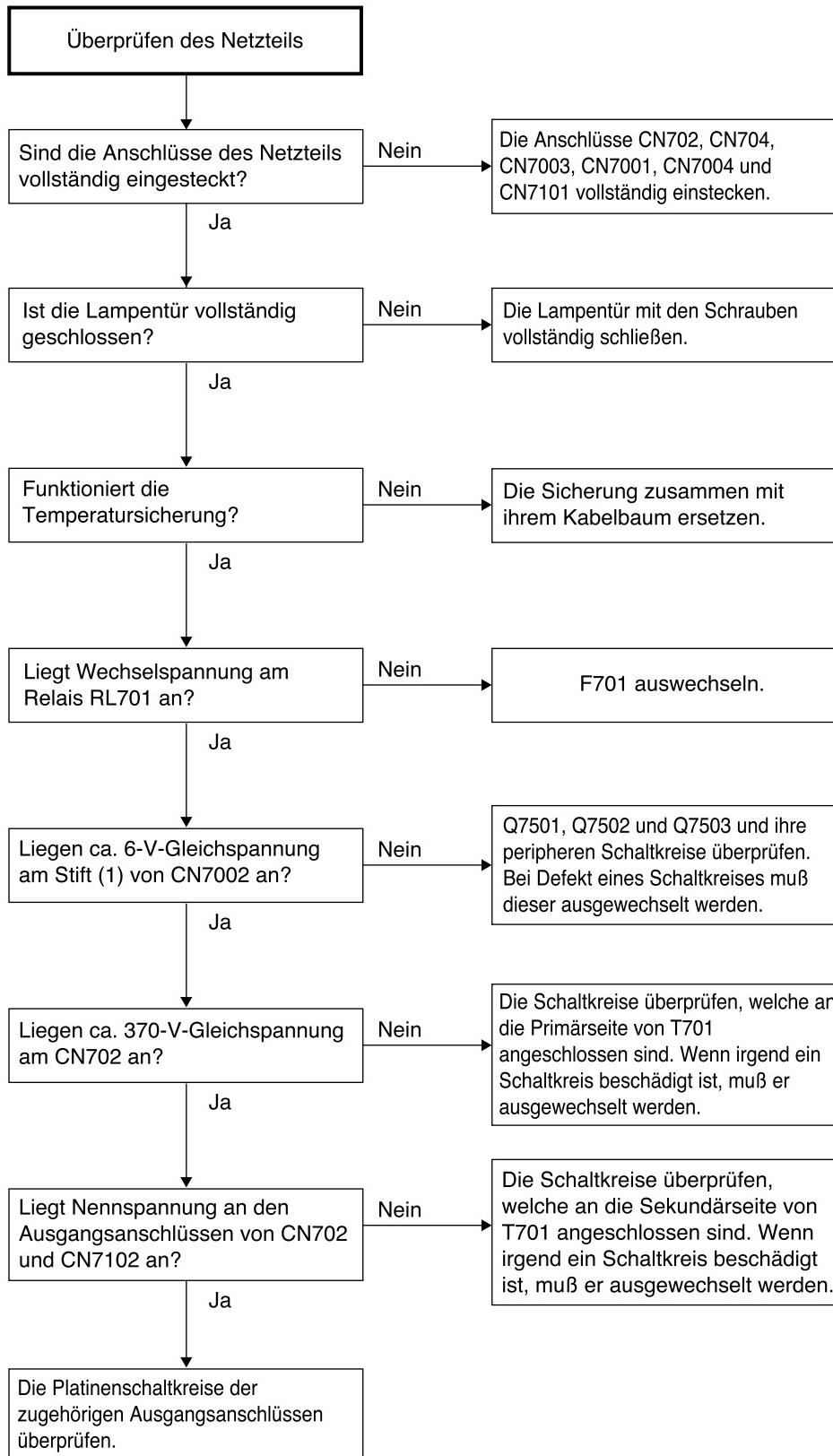
Den Wert von 1 auf 0 für USB MODE in Special (Werksmodus) umstellen.
(Für diese Änderung wird Eingabe eines 232C-Befehls unmöglich.)

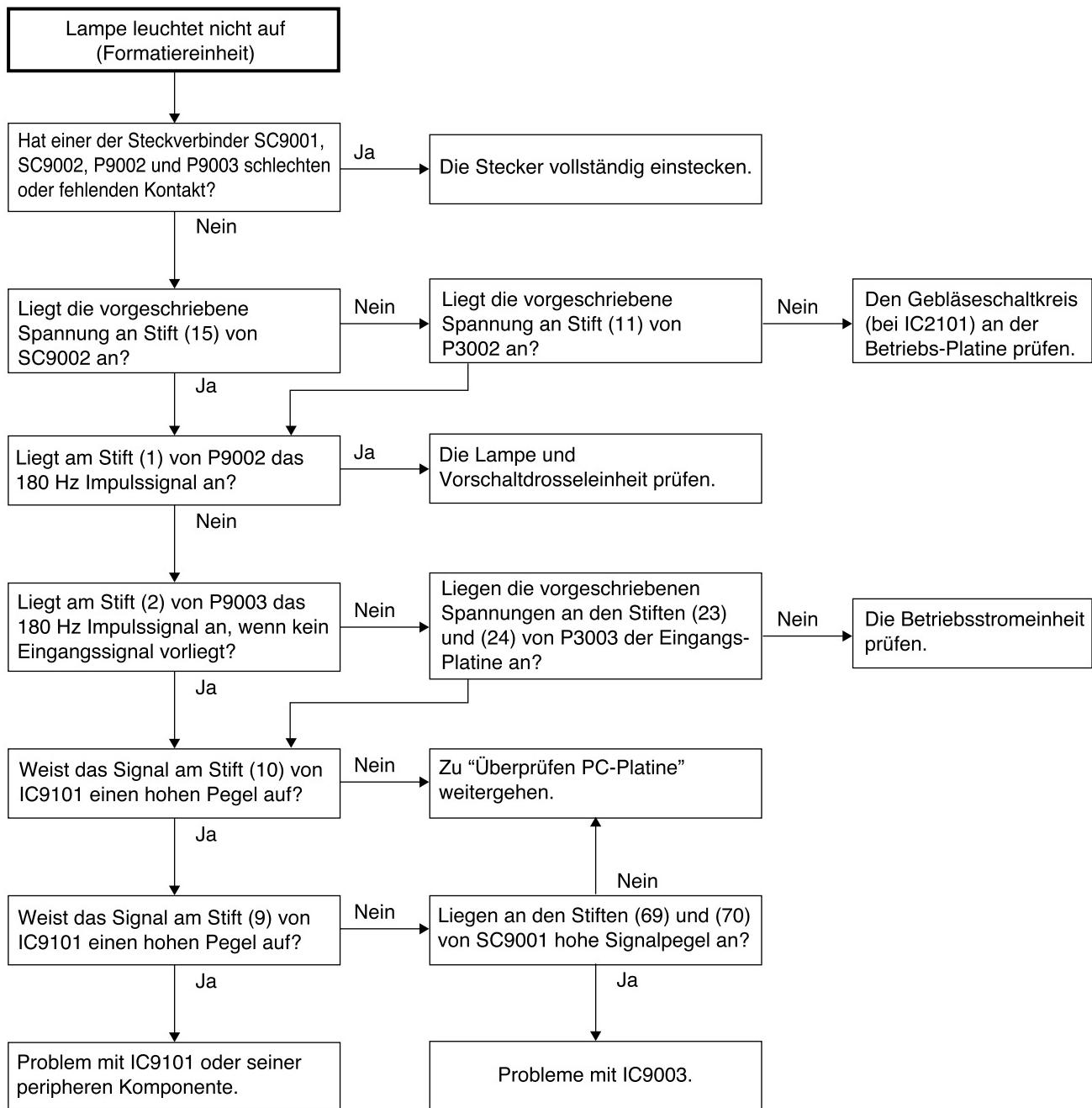
<Achtung>

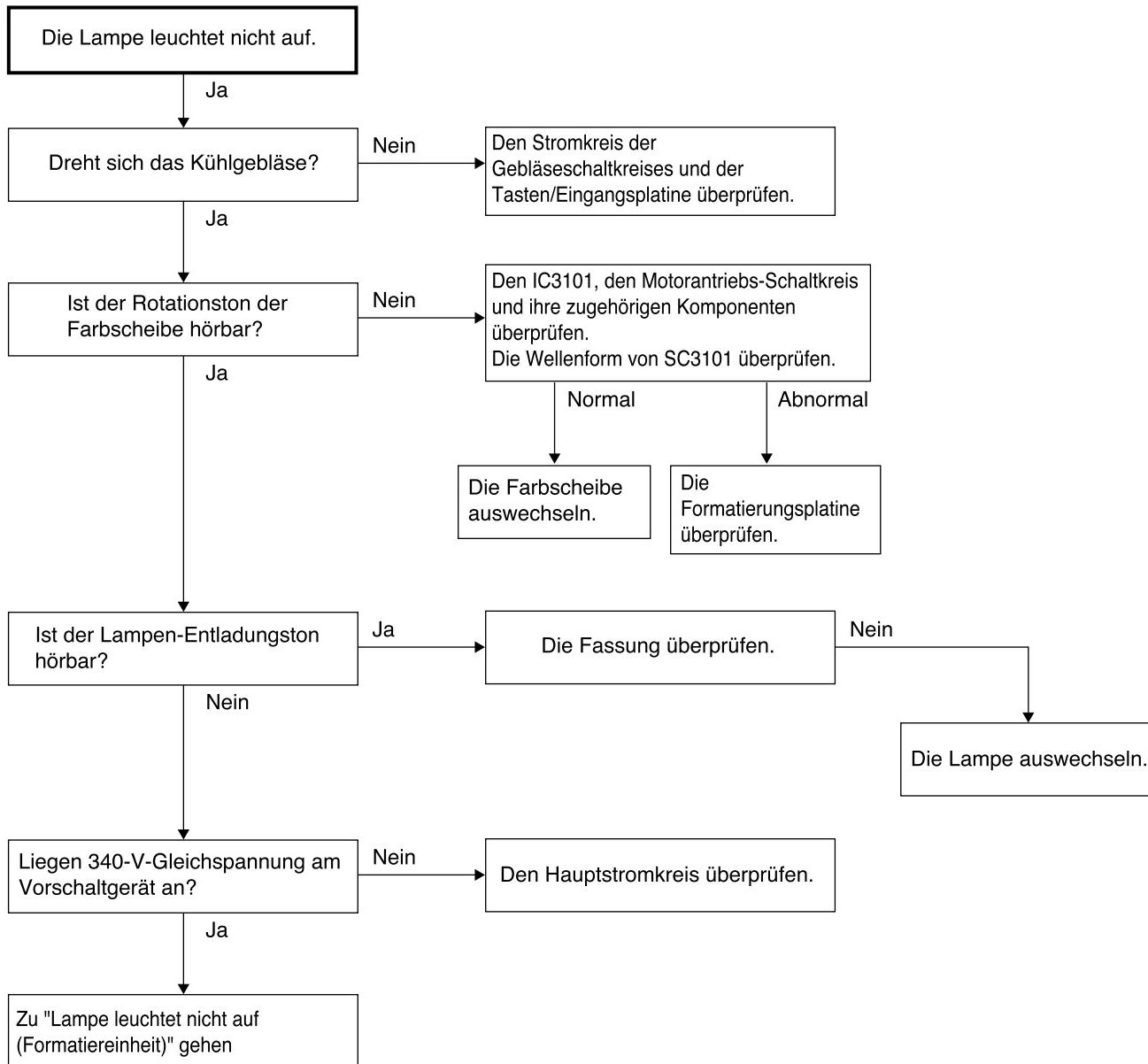
Nach der Installation für USB zum 232C Treiber soll 232C mit SW2002 am Tasten-PC gewählt werden.
Das USB-Kabel anschließen, und COM2 für TeraTerm ändern (Seriell-Anschluss einrichten), und dann die "ENTER"-Taste drücken und bestätigen, dass die Meldung "ERR" zurückkommt.
Wenn "ERR" zurückkommt, ist die Einstellung korrekt. Wenn "ERR" nicht zurückkommt, ist COM2 falsch.
Bitte nacheinander COM3 und COM4 probieren, und den richtigen COM-Anschluss finden.

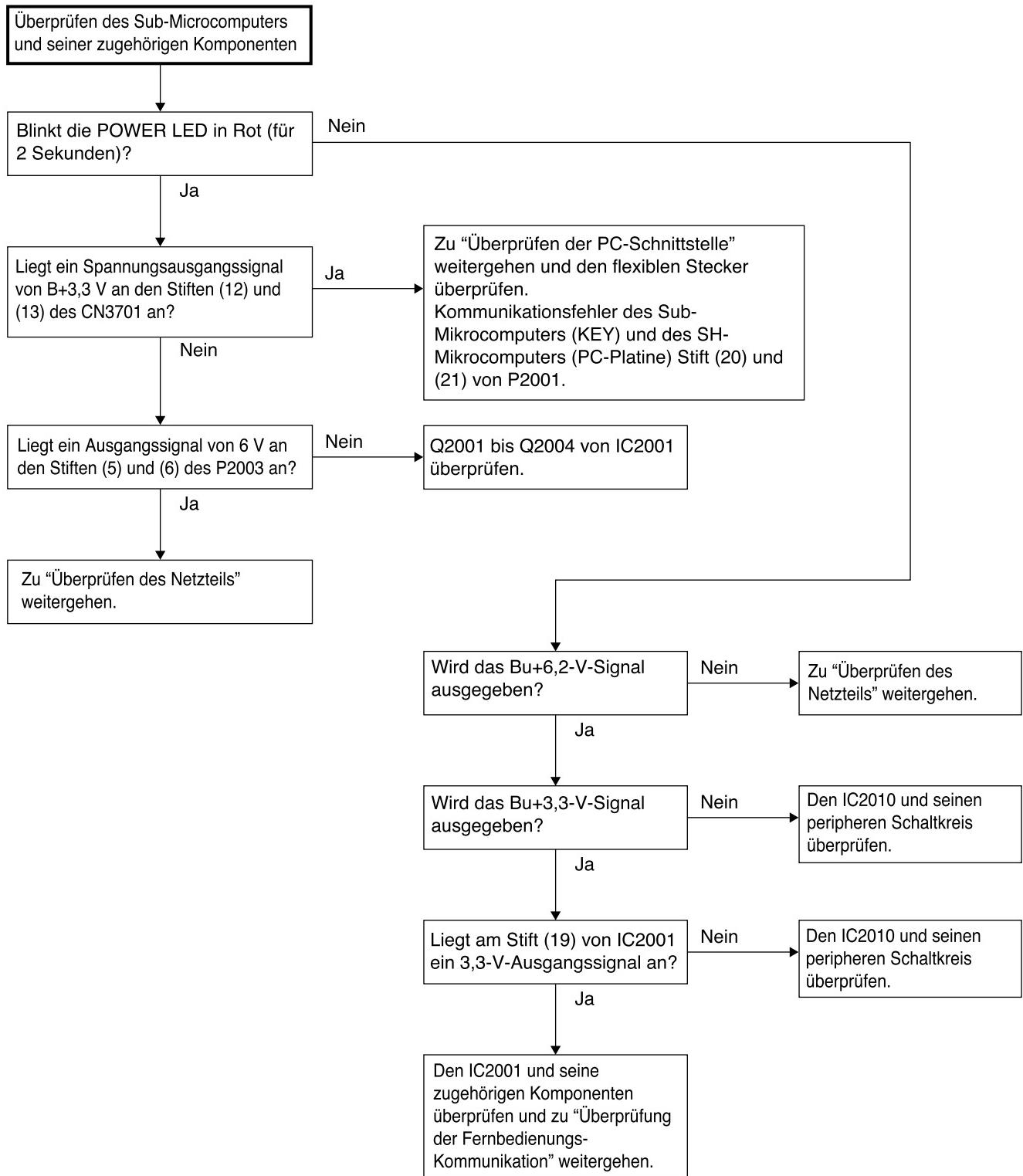
FEHLERSUCHTABELLE

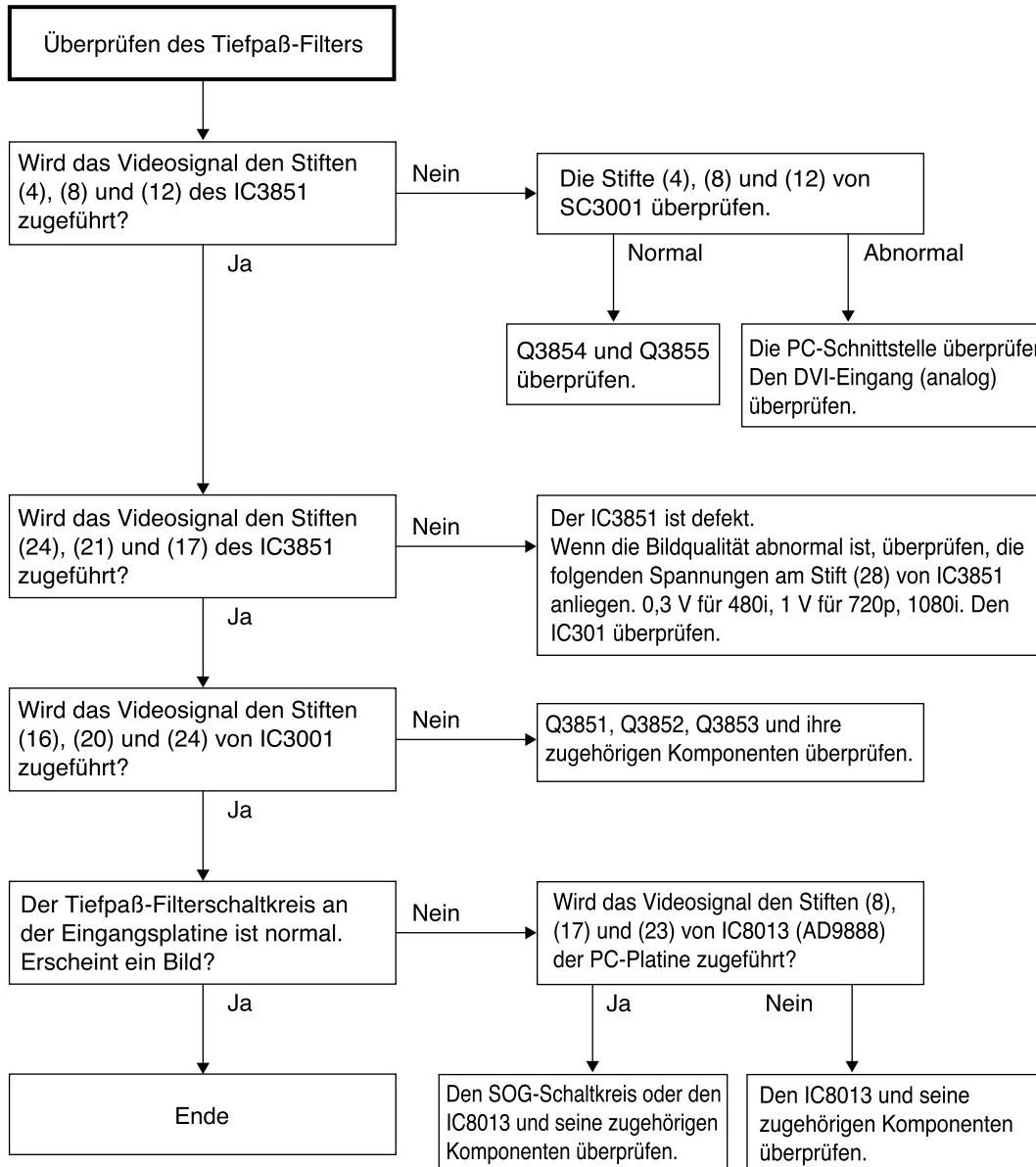


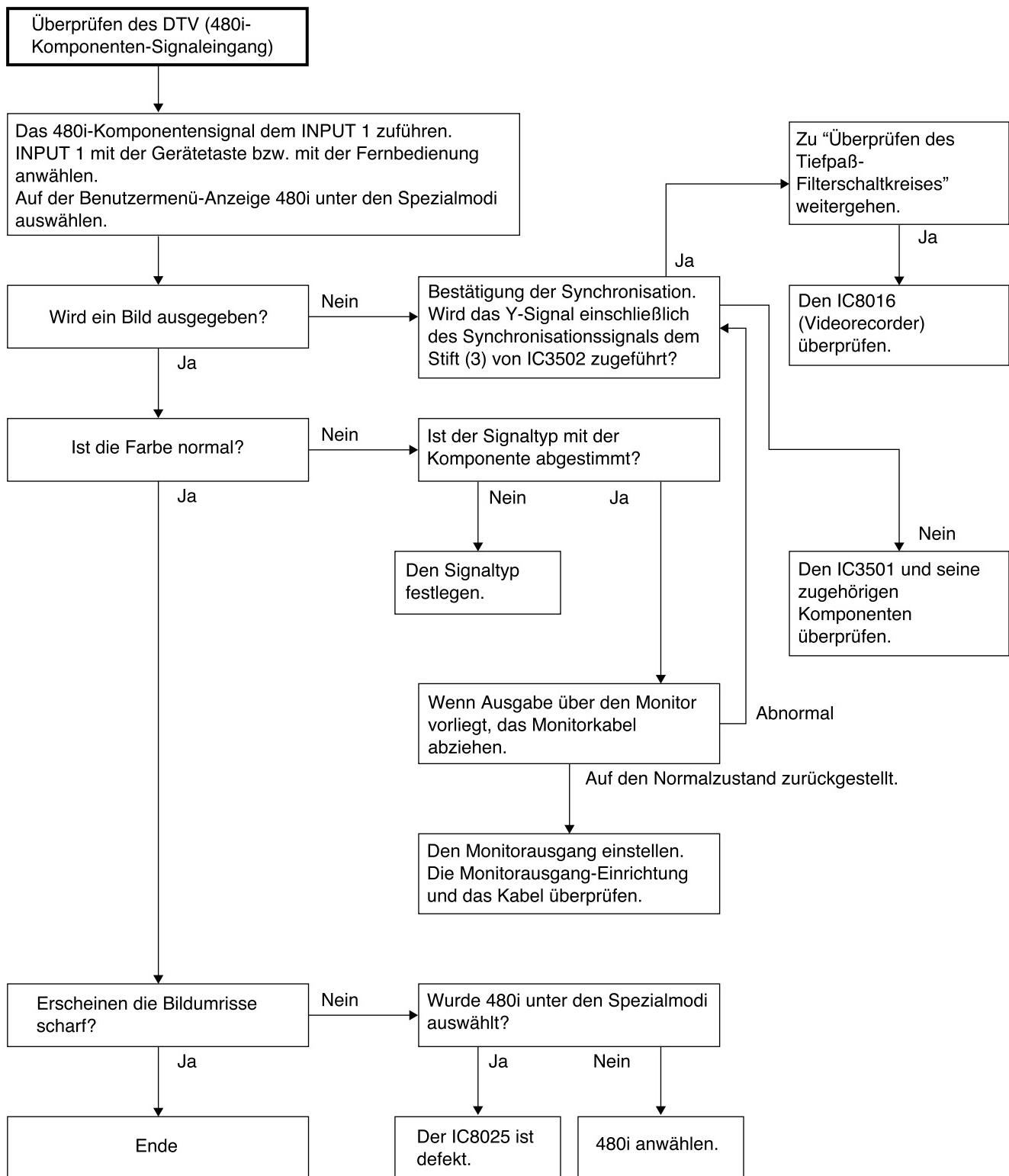


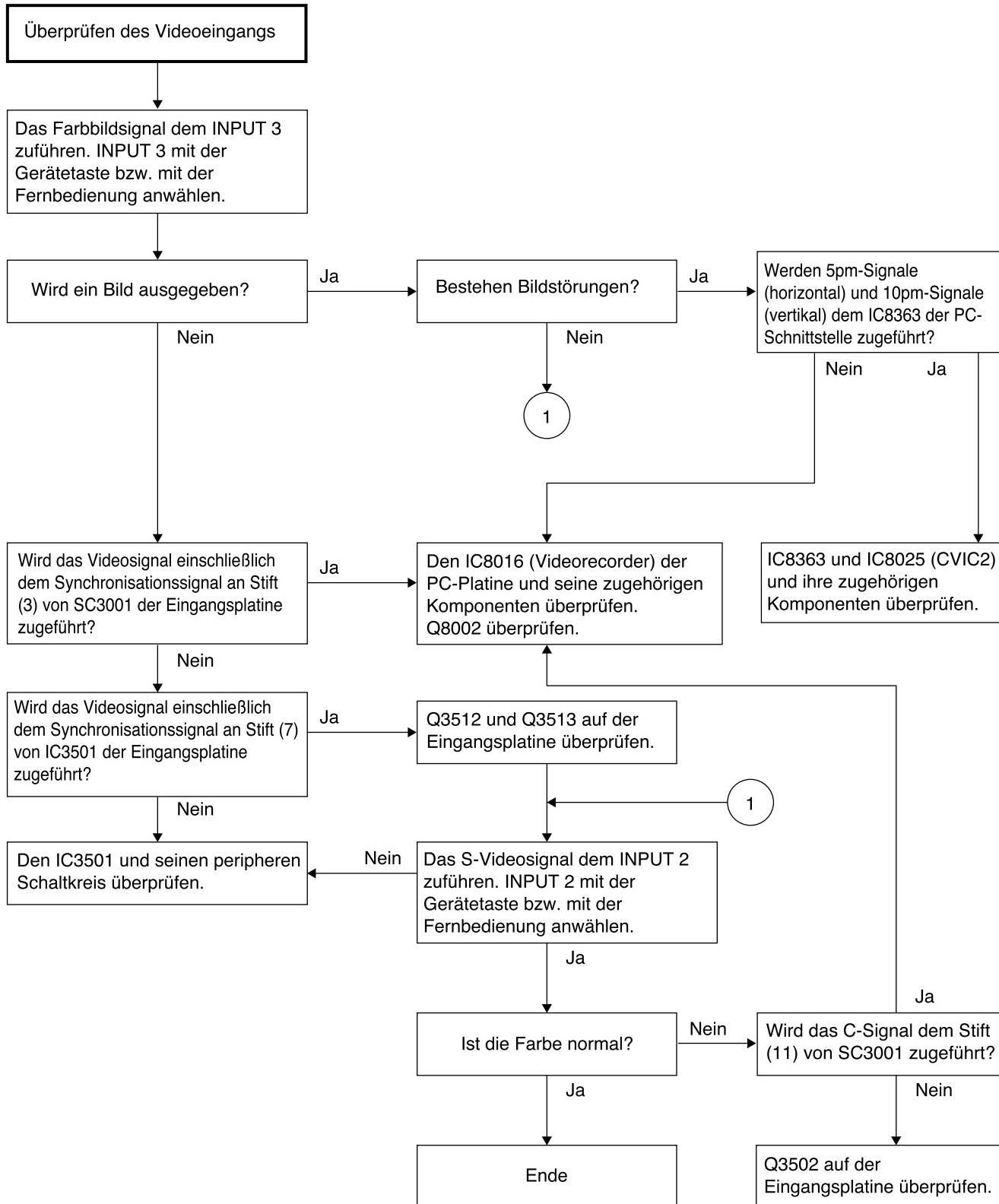




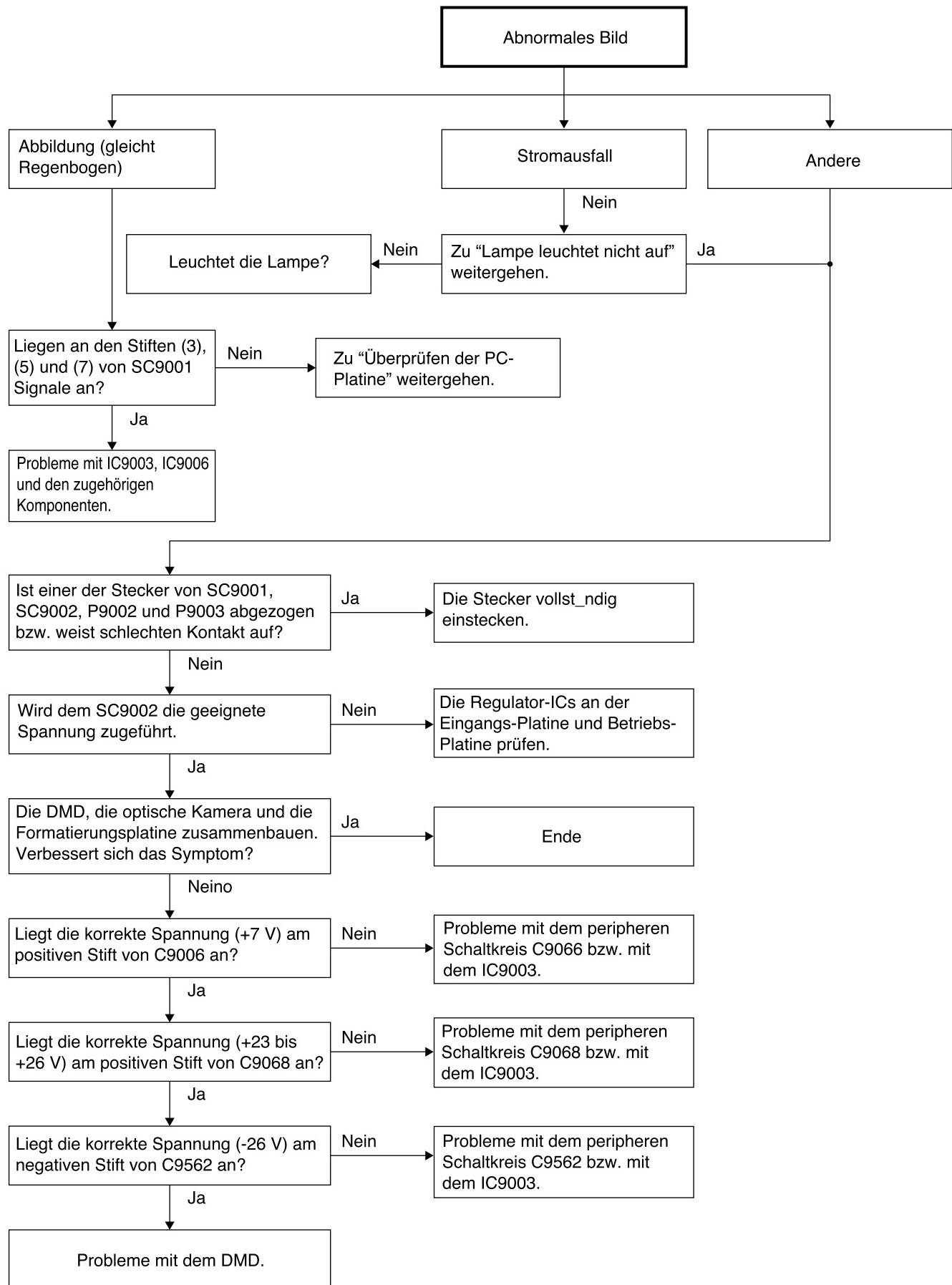




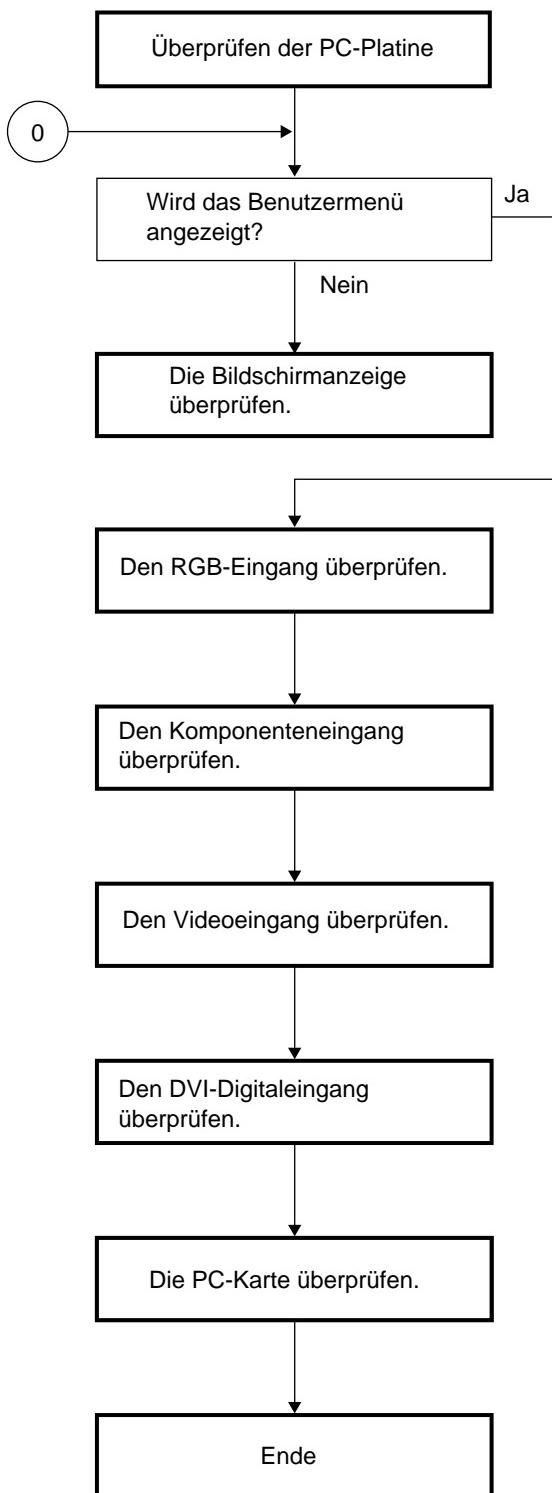




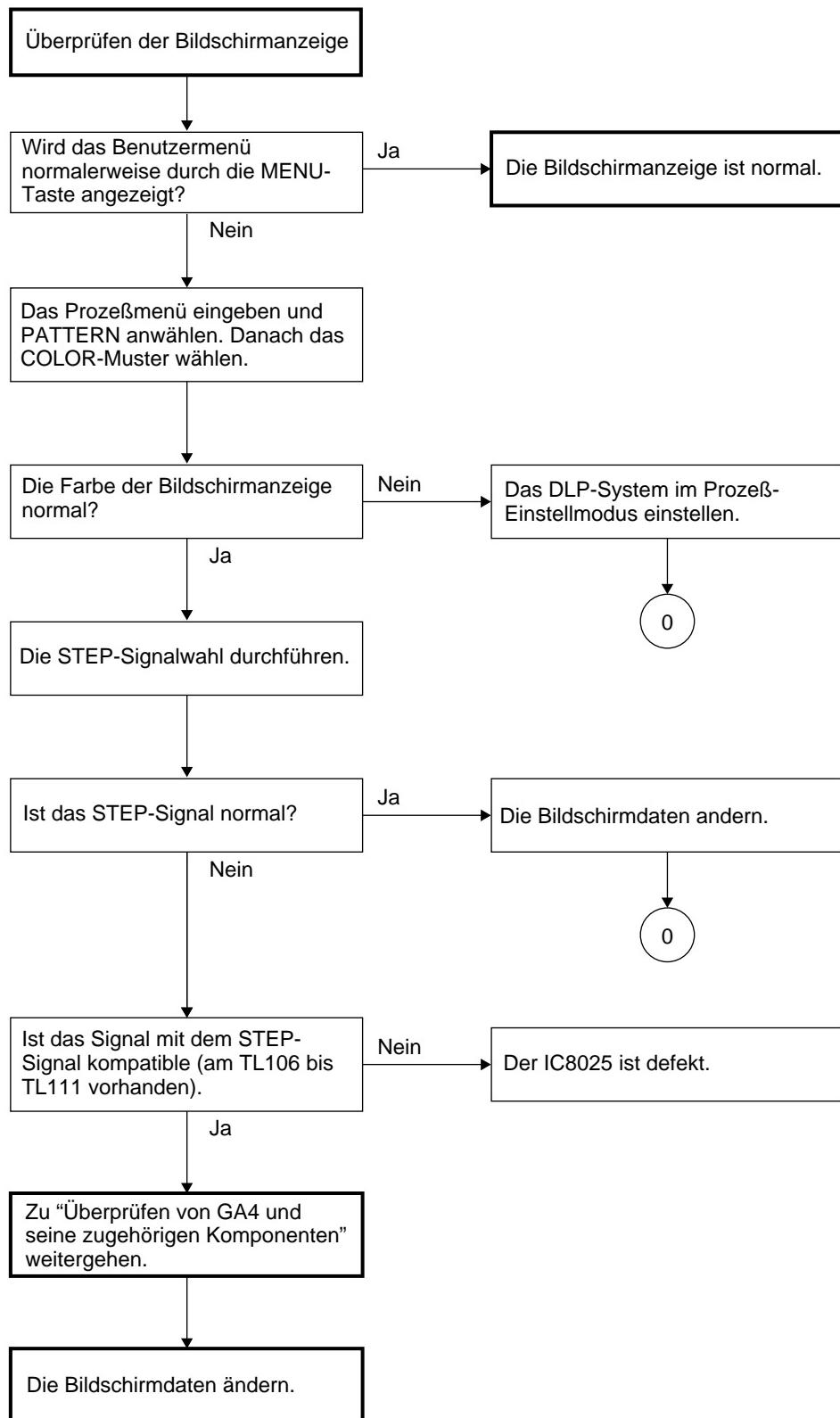
- FORMATTER Unit



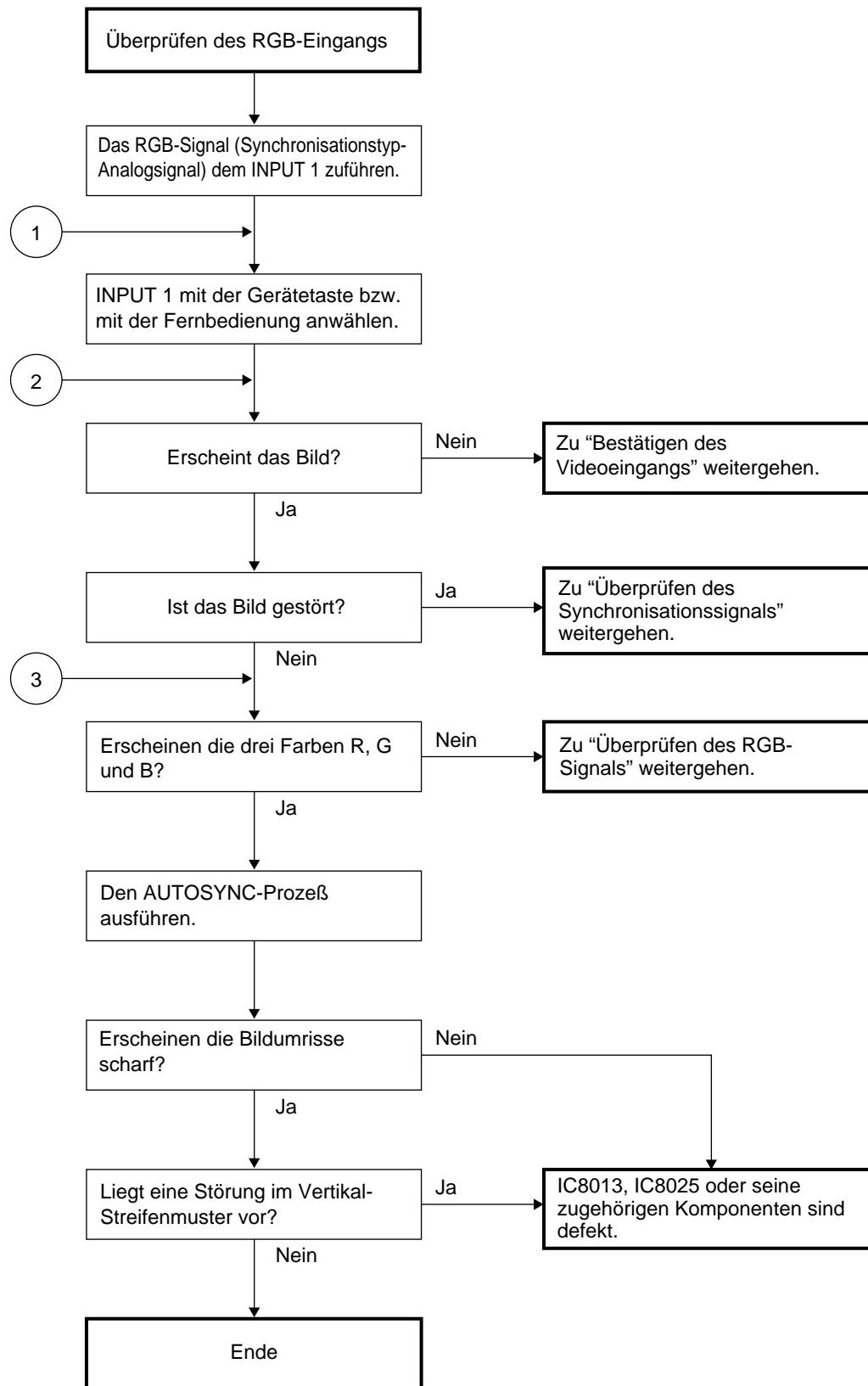
- PC I/F Unit-1/12



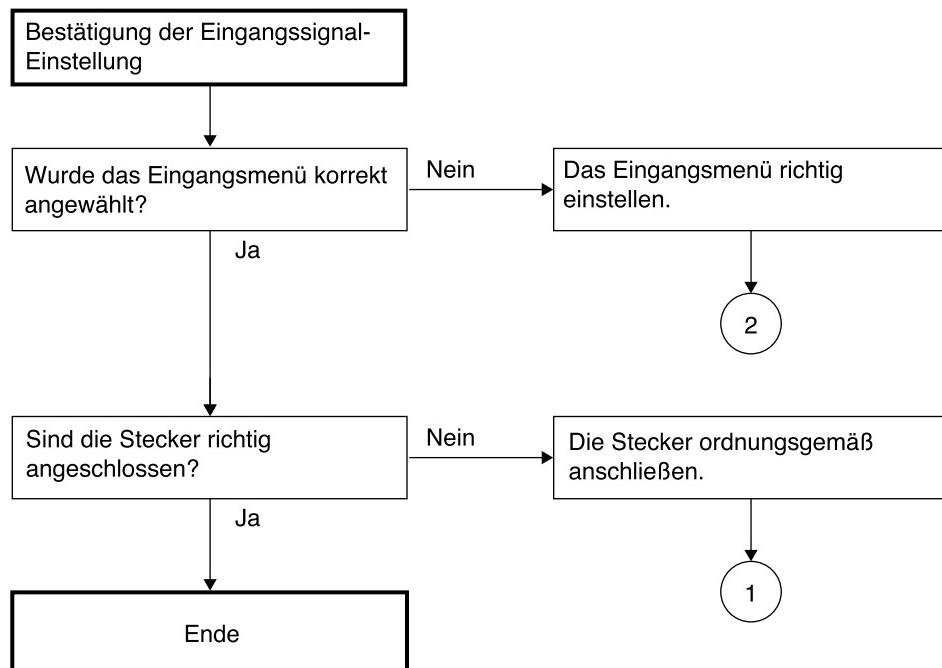
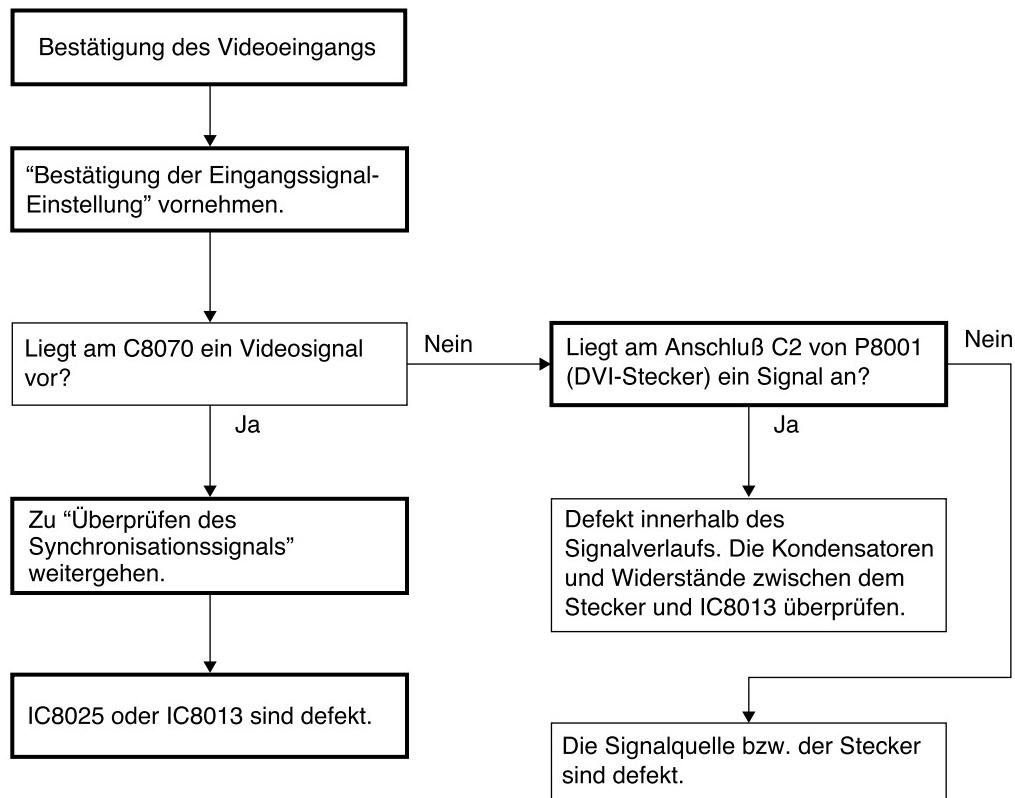
- PC I/F Unit-2/12



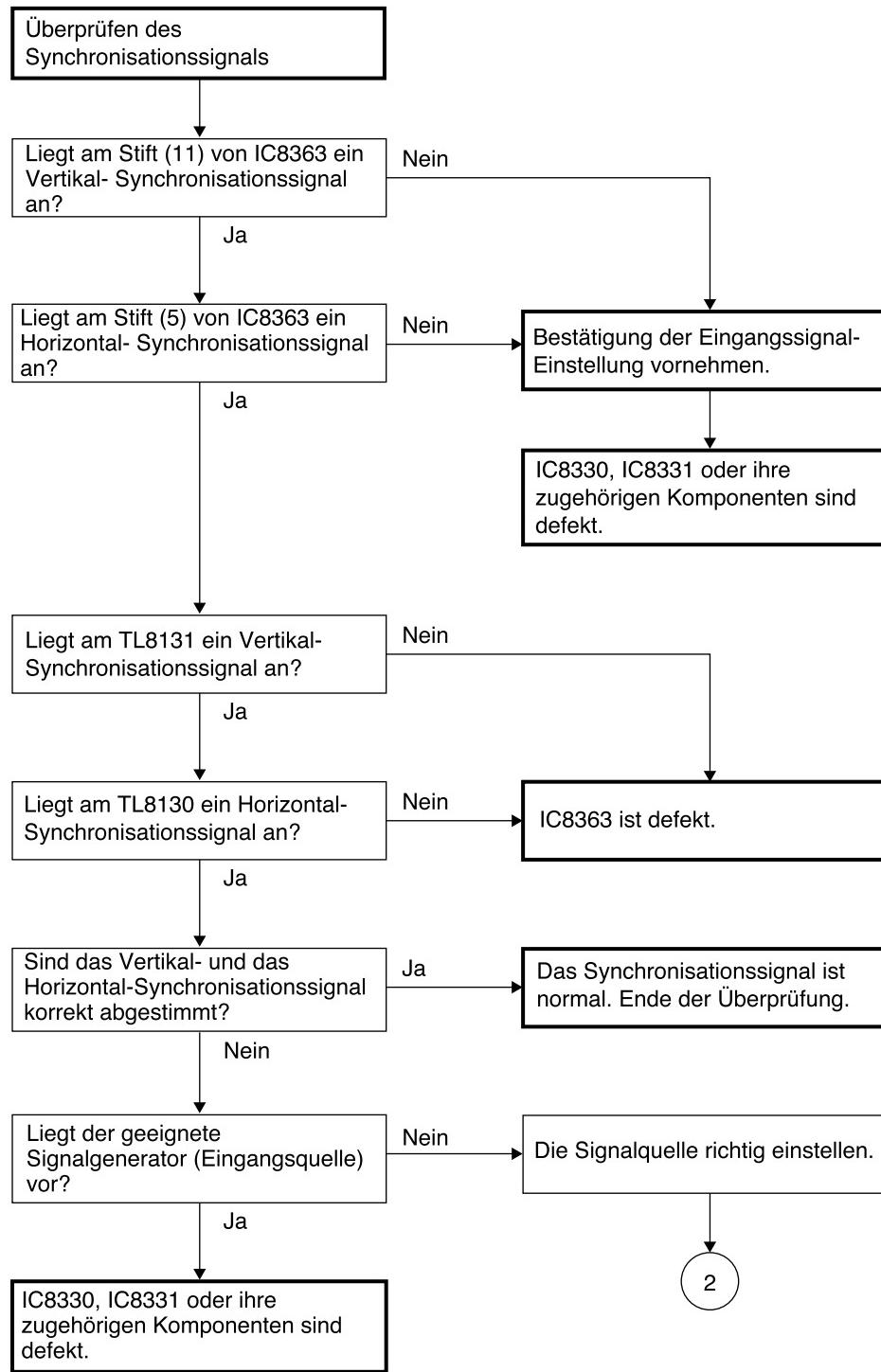
- PC I/F Unit-3/12



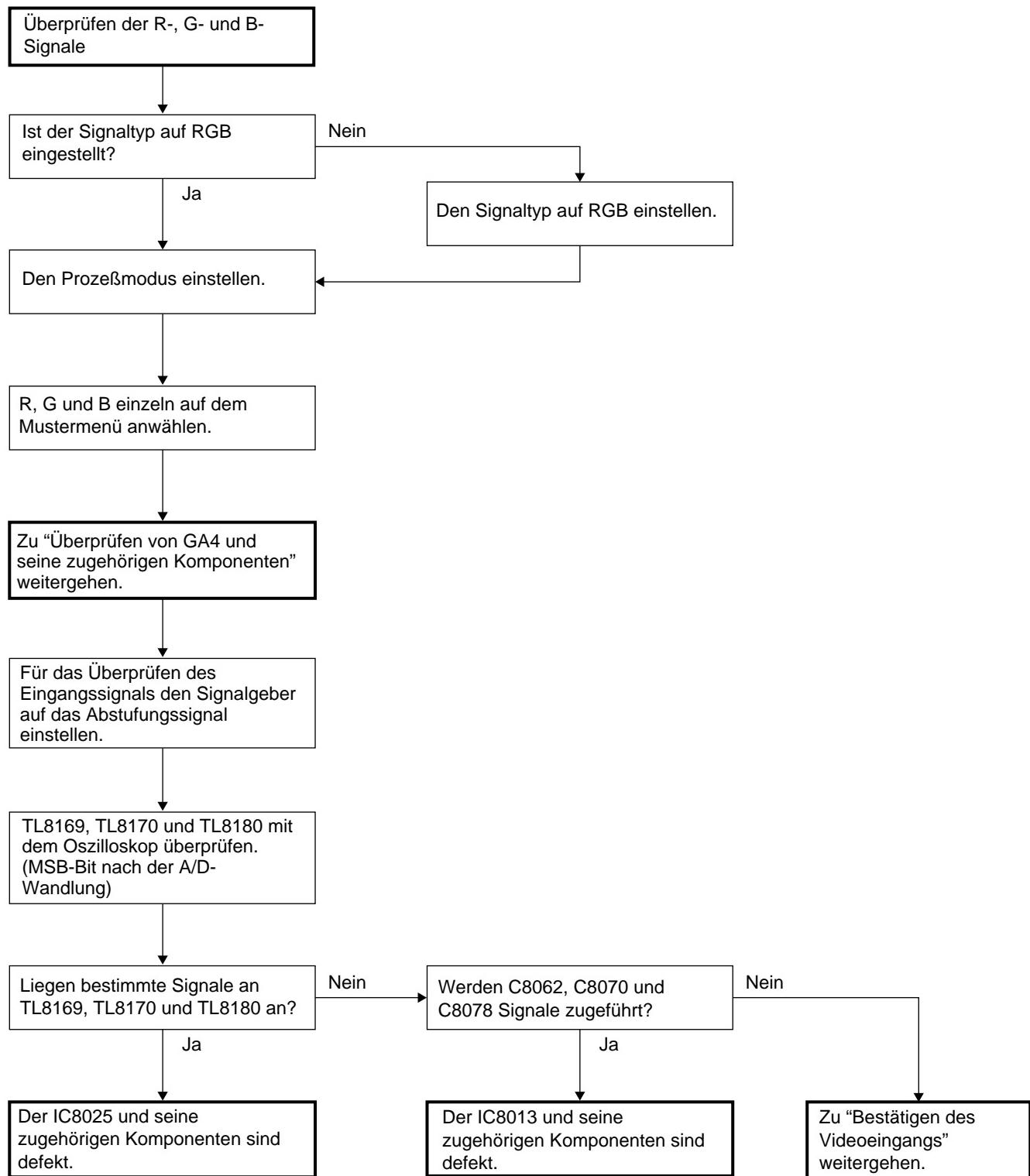
- PC I/F Unit-4/12



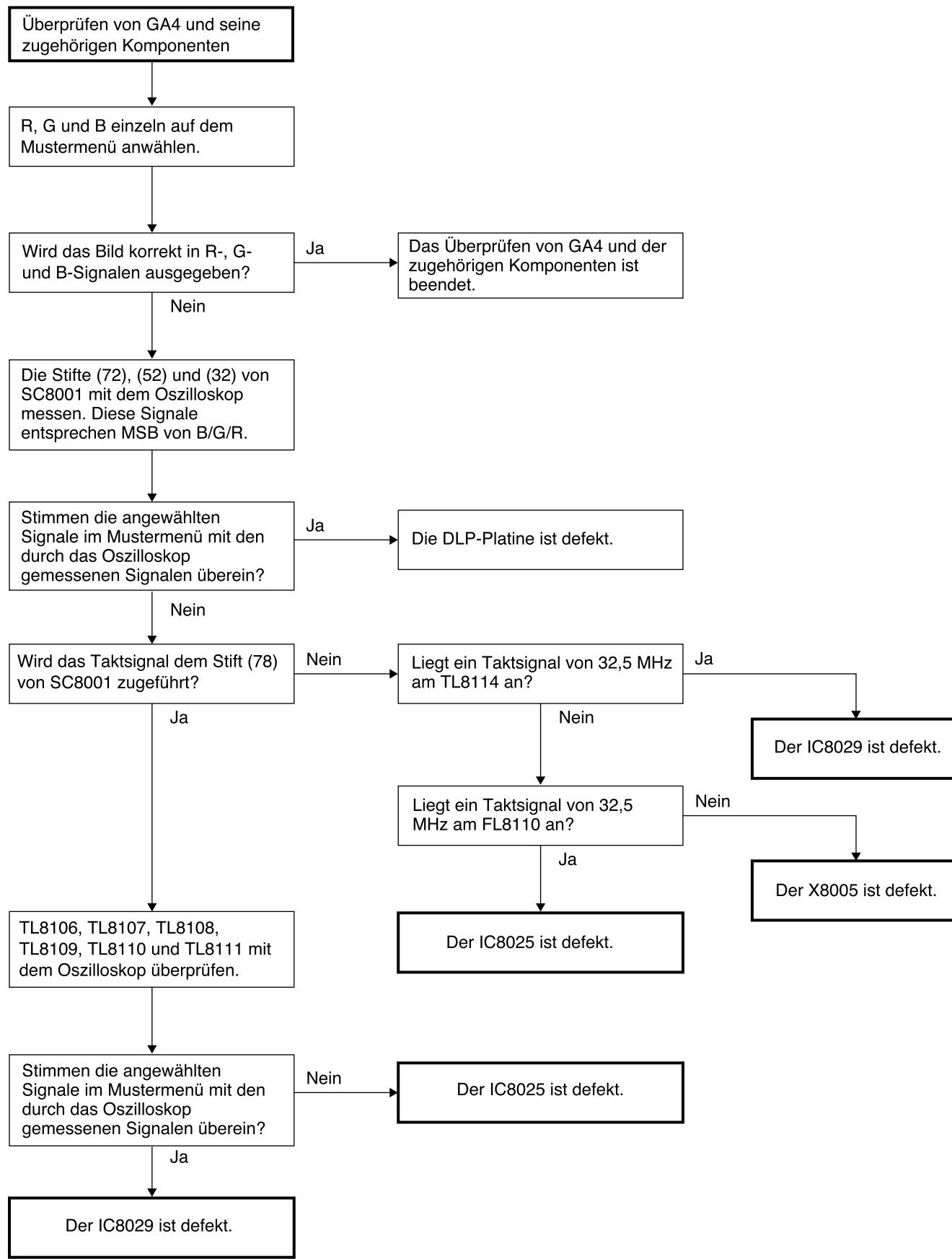
- PC I/F Unit-5/12



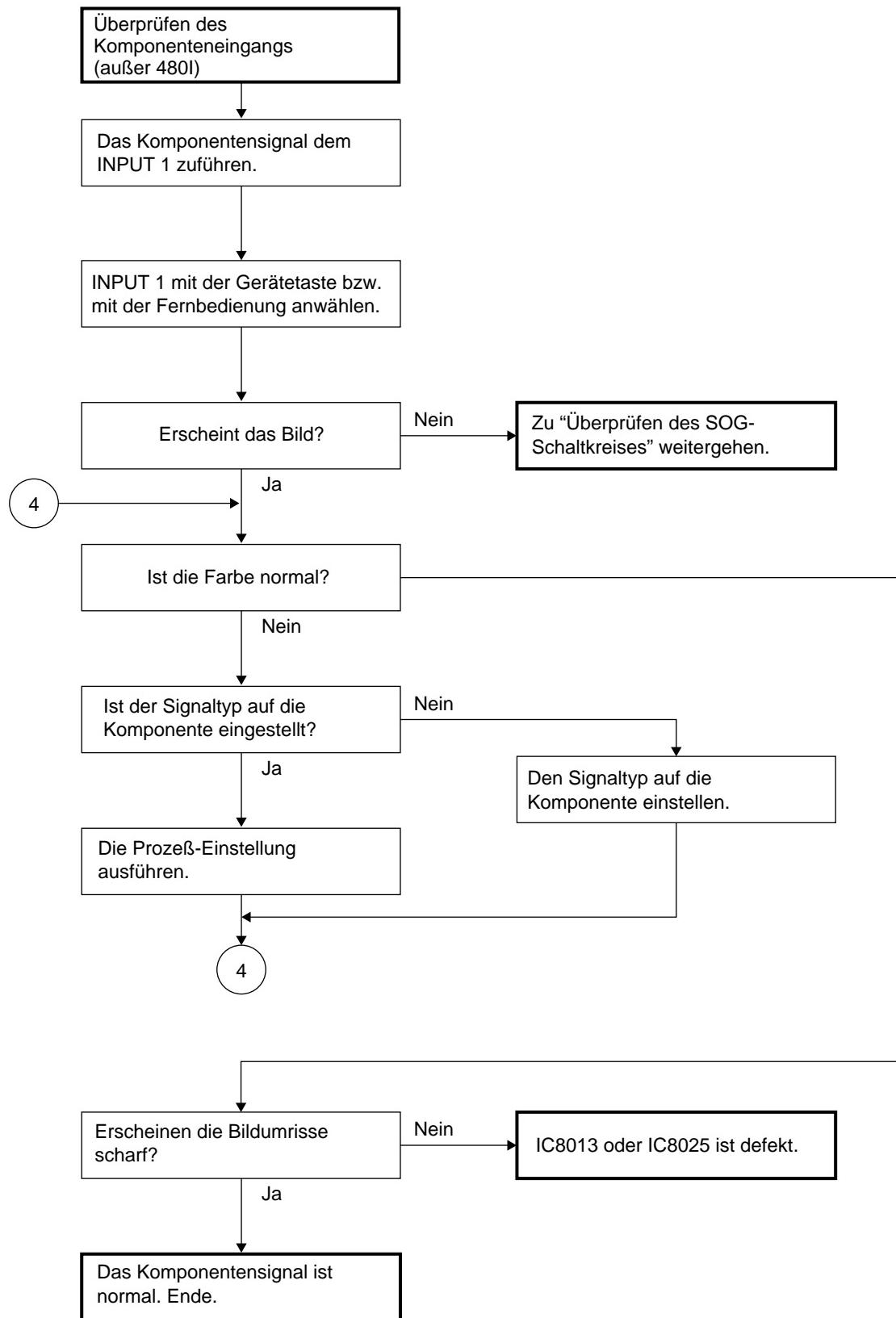
- PC I/F Unit-6/12



- PC I/F Unit-7/12



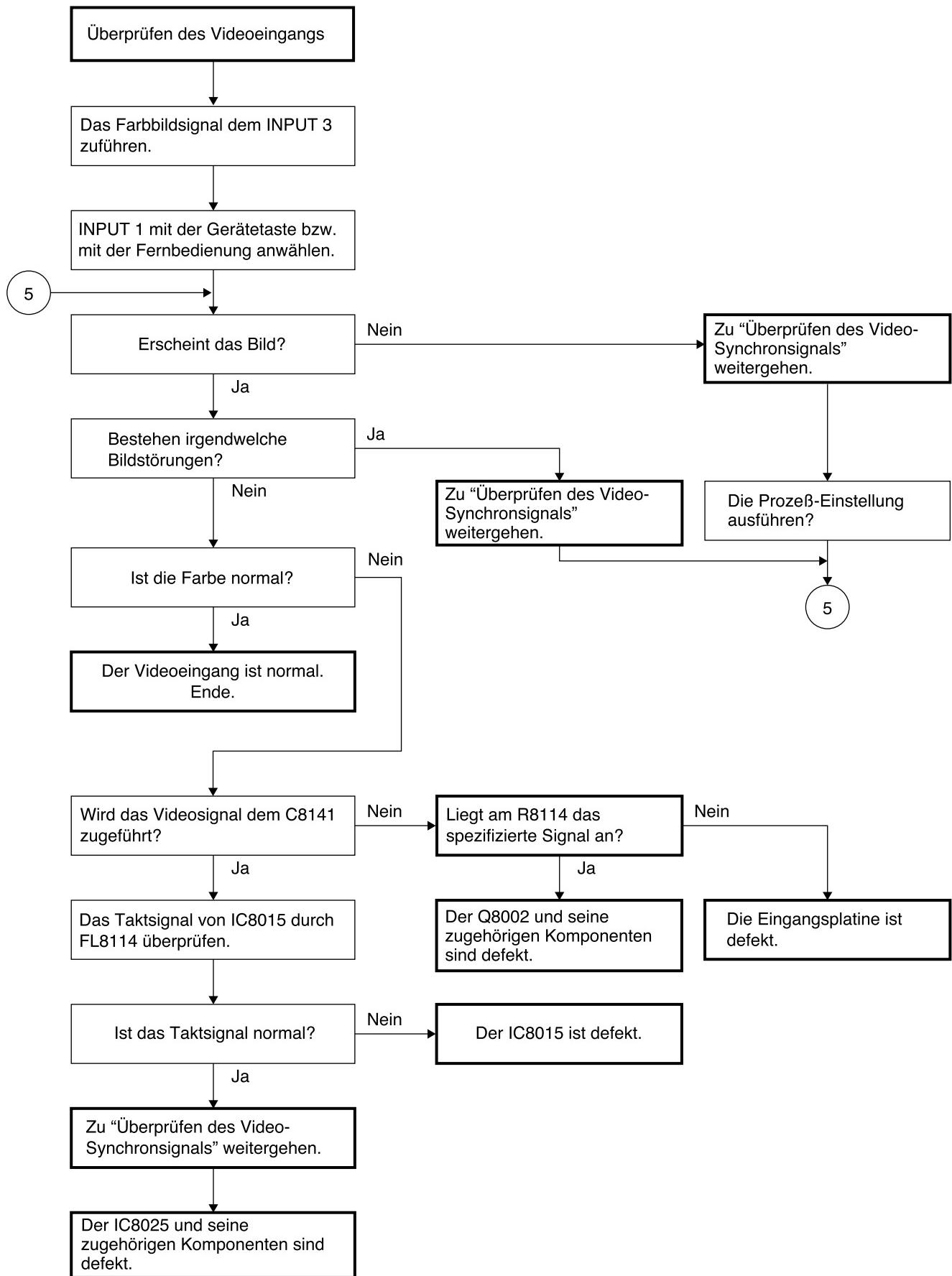
- PC I/F Unit-8/12



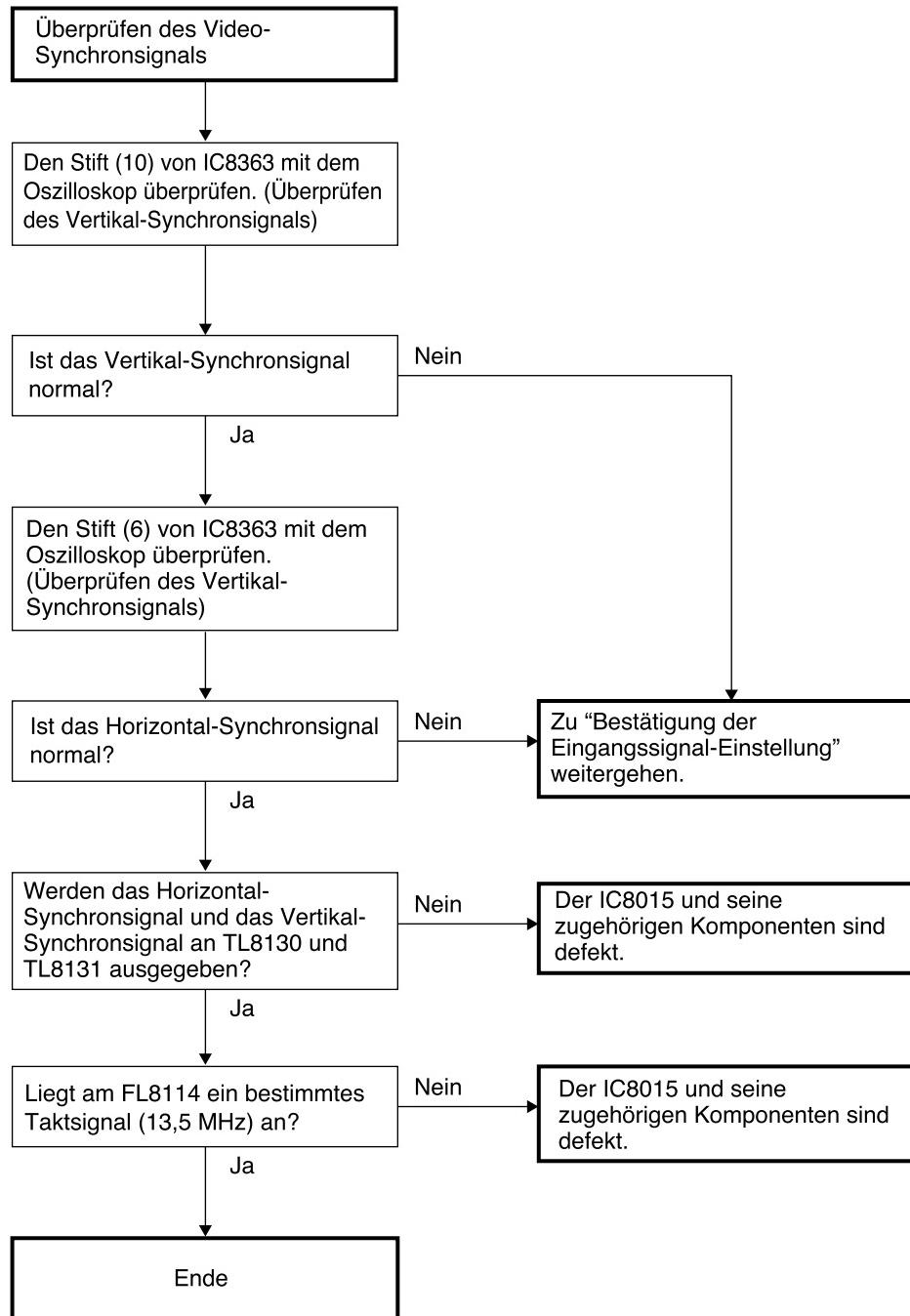
- PC I/F Unit-9/12



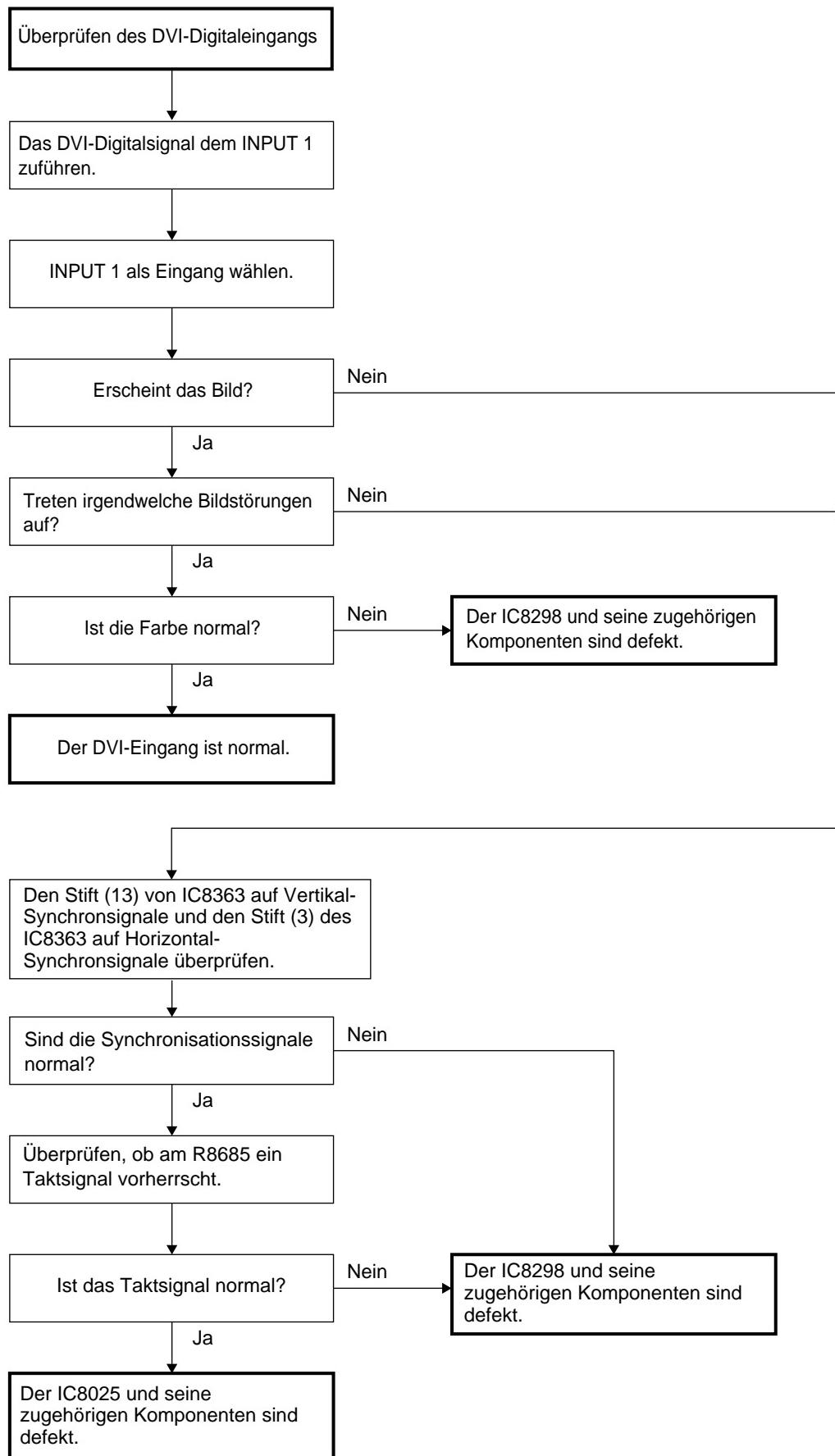
- PC I/F Unit-10/12



- PC I/F Unit-11/12



● PC I/F Unit-12/12



CHASSIS LAYOUT/CHASSIS-ANORDNUNG

H

G

F

E

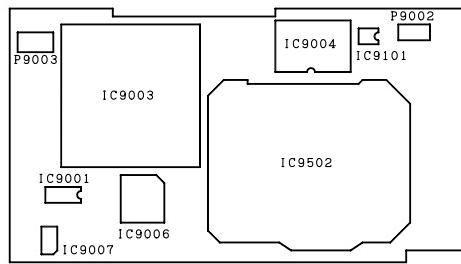
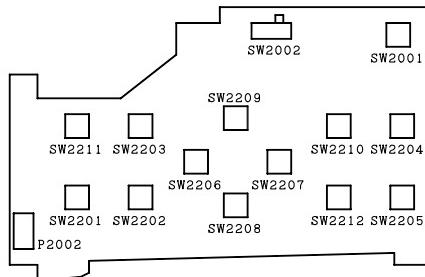
D

C

B

A

KEY UNIT
DUNTKB067DE

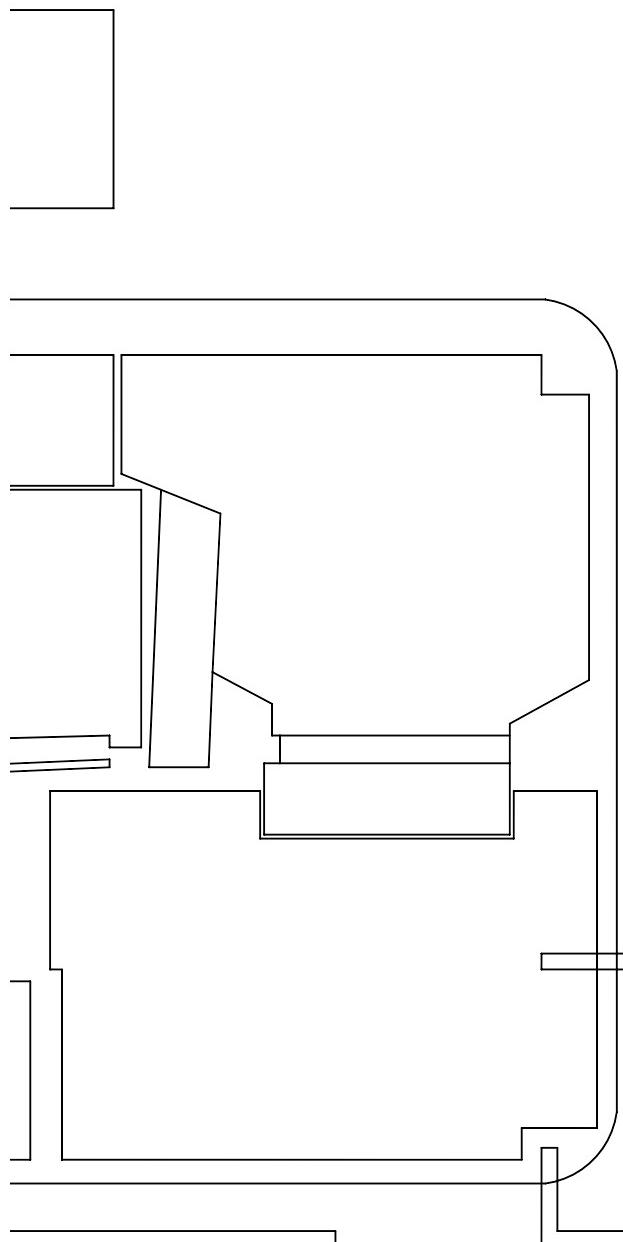


FORMATTER UNIT
DUNTKB065DE

BALLAST UNIT
RDENCA005WJZZ

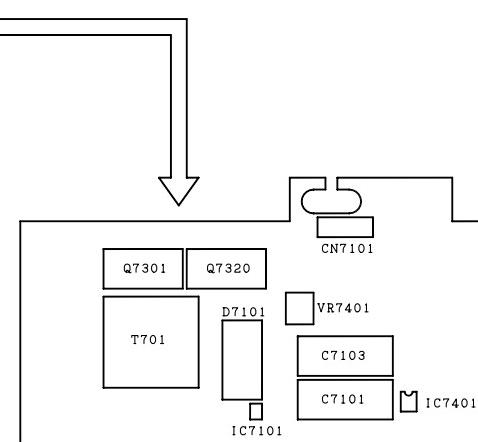
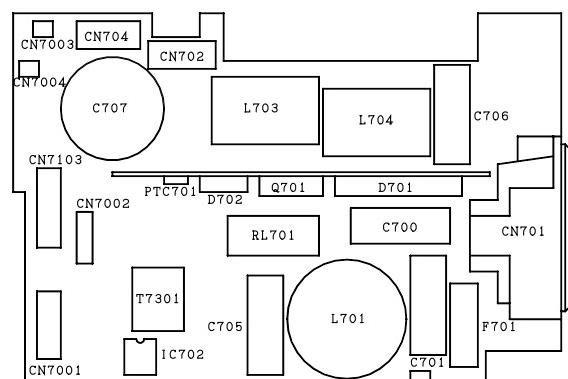
PC I/F UNIT
RPCI-0057CEZZ

INP
DUN



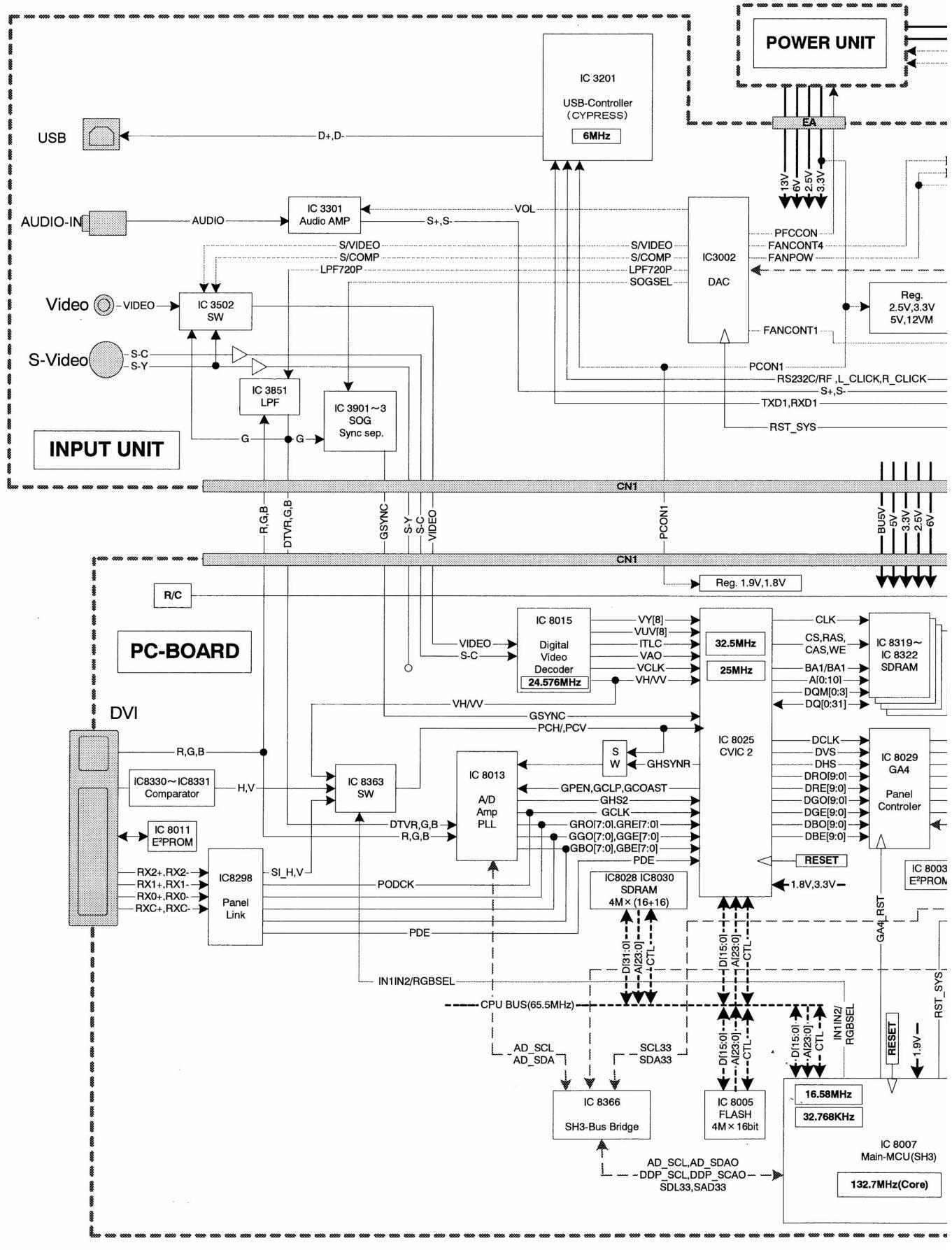
INPUT UNIT
DUNTKB066DE

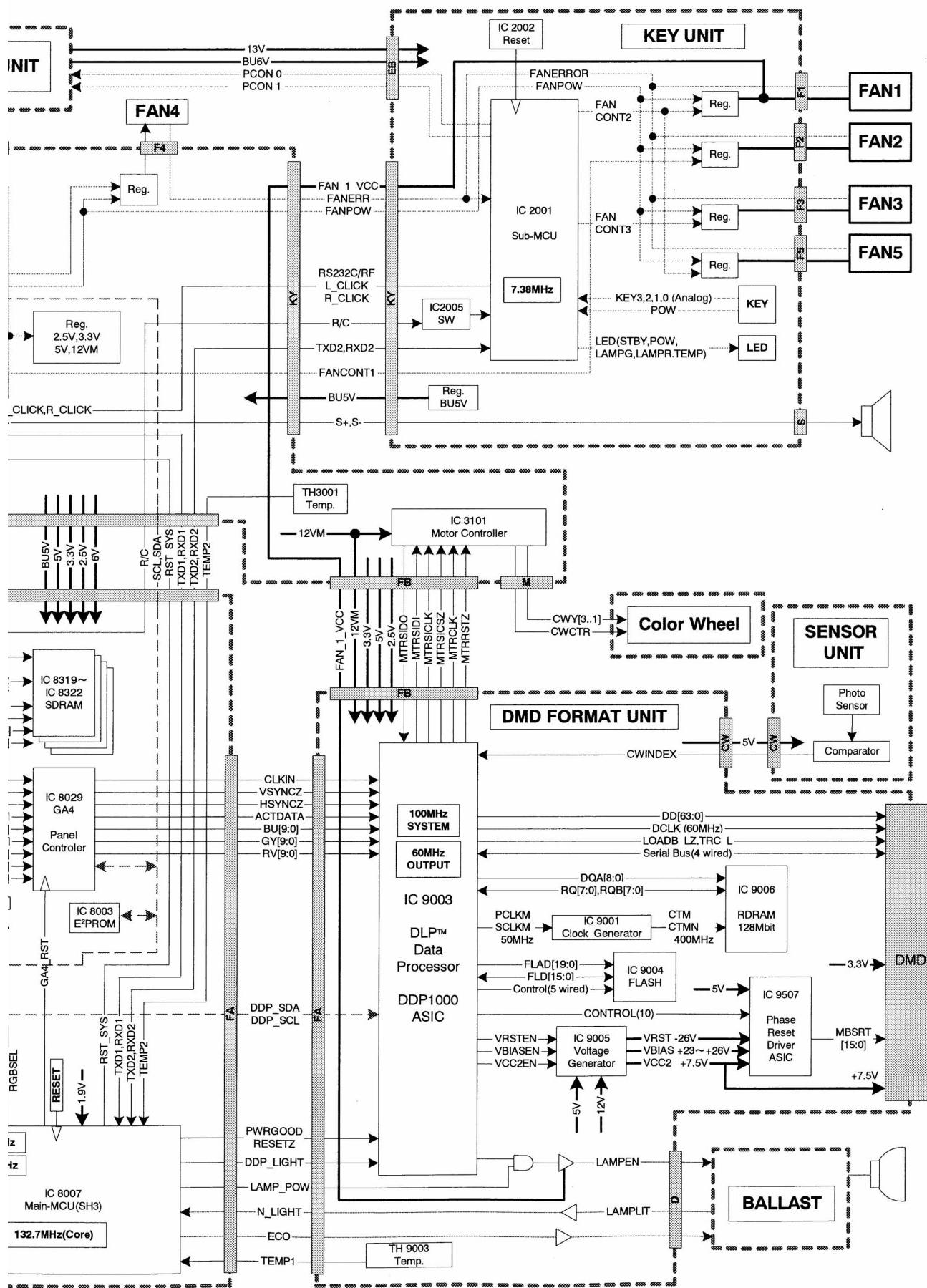
P F C U N I T
RDENCA004WJ



POWER UNIT
RDENCA010WJZZ

BLOCK DIAGRAM/BLOCKCHALTBILD





OVERALL WIRING DIAGRAM/GESAMTSCHALTPLAN

H

G

F

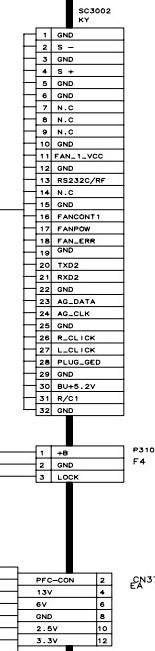
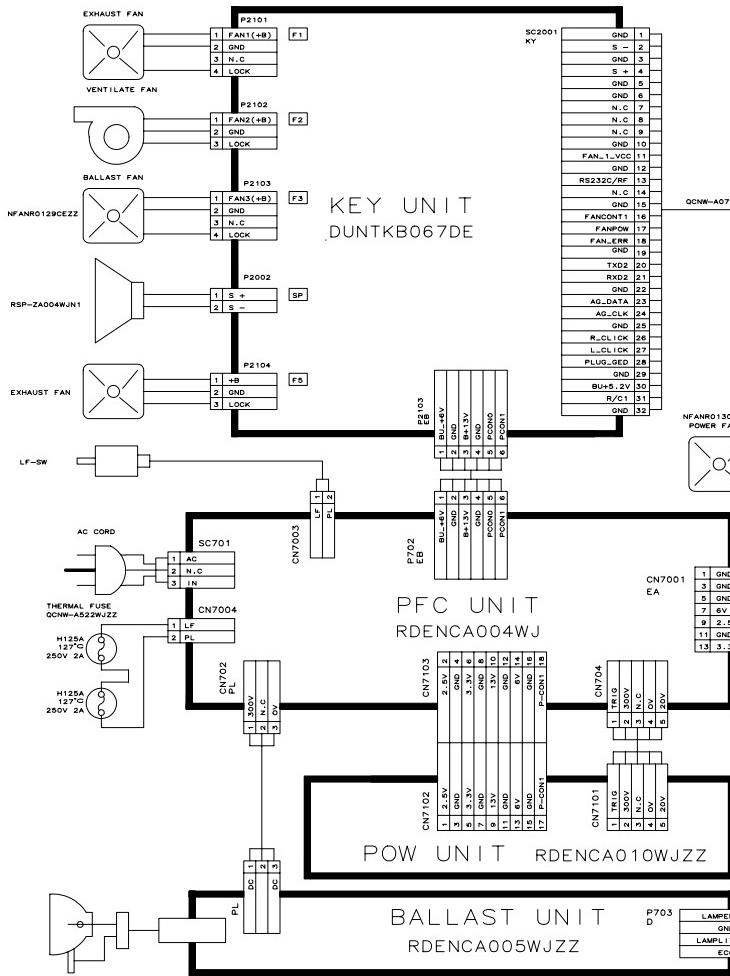
E

D

C

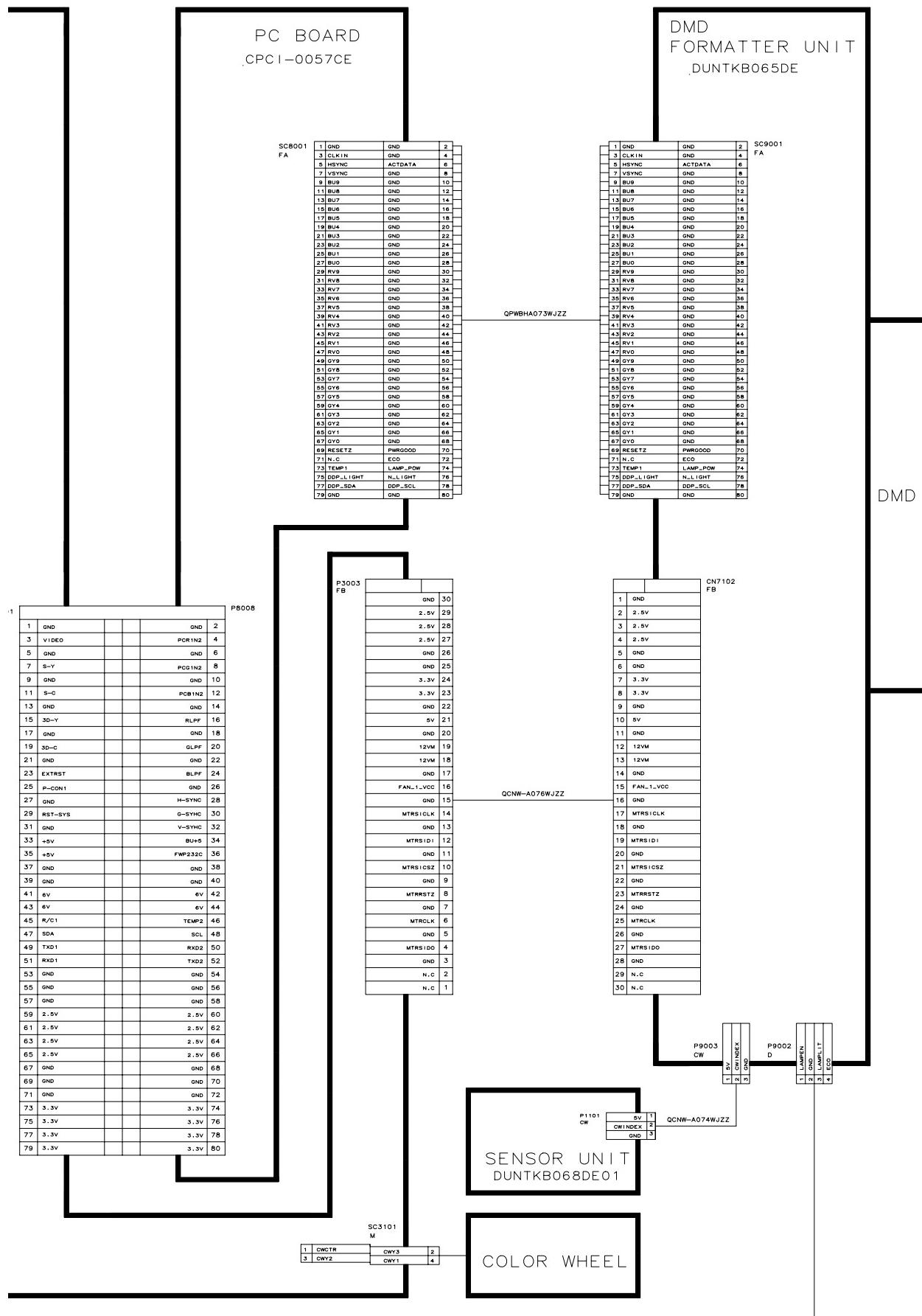
B

A



INPUT UNIT
DUNTKB066DE

SC3001 PA	
1	GND
3	VIDEO
5	GND
7	S-Y
9	GND
11	S-C
13	GND
15	3D-Y
17	GND
19	3D-C
21	GND
23	EXTST
25	P-CON1
27	GND
29	RST-SYS
31	GND
33	+5V
35	+5V
37	GND
39	GND
41	EV
43	EV
45	R/C1
47	SDA
49	RXD1
51	RXD1
53	GND
55	GND
57	GND
59	2.5V
61	2.5V
63	2.5V
65	2.5V
67	GND
69	GND
71	GND
73	3.3V
75	3.3V
77	3.3V
79	3.3V



DESCRIPTION OF SCHEMATIC DIAGRAM

VOLTAGE MEASUREMENT CONDITION:

1. Voltages at test points are measured at the supply voltage of AC 230V. Signals are fed by a colour bar signal generator for servicing purpose and the above voltages are measured with a 20k ohm/V tester.

WAVEFORM MEASUREMENT CONDITION:

1. Waveforms at test points are observed at the supply voltage of AC 230V. Signals are fed by a colour bar signal generator for servicing purpose.

INDICATION OF RESISTOR & CAPACITOR:

RESISTOR

1. The unit of resistance “ Ω ” is omitted.
(K=k Ω =1000 Ω , M=M Ω).
2. All resistors are $\pm 5\%$, unless otherwise noted.
(J= $\pm 5\%$, F= $\pm 1\%$, D= $\pm 0.5\%$)
3. All resistors are 1/16W, unless otherwise noted.
4. All resistors are Carbon type, unless otherwise noted.

©: Solid Ⓣ: Cement
Ⓐ: Oxide Film Ⓡ: Special
Ⓜ: Metal Coating

CAPACITOR

1. All capacitors are μF , unless otherwise noted.
(P=pF= $\mu\mu\text{F}$).
2. All capacitors are 50V, unless otherwise noted.
3. All capacitors are Ceramic type, unless otherwise noted.
(ML): Mylar (TA): Tantalum
(PF): Polypro Film (ST): Styrol

CAUTION:

This circuit diagram is original one, therefore there may be a slight difference from yours.

SAFETY NOTES:

1. DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACEING PARTS.
2. SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.

IMPORTANT SAFETY NOTICE:

PARTS MARKED WITH “⚠ ([REDACTED]) ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFORMANCE OF THE SET.

BESCHREIBUNG DES SCHEMATISCHEN SCHALTPLANS

SPANNUNGSMESSUNGEN:

1. Spannungen an den Prüfpunkten werden bei einer Netzspannung von 230V gemessen, Signale werden für die Wartung mit einem Farbbalken-Signal generator zugeführt, und Spannungen werden mit einem Meßinstrument (20 k Ω /V) ermittelt.

SIGNALFORMMESSUNGEN:

1. Die Wellenformen an den Testpunkten werden bei einer Netzspannung von 230V verfolgt. Signale werden für die Wartung mit einem Farbbalken-Signal generator zugeführt.

BEZEICHNUNG DES WIDERSTANDS UND KONDENSATORS:

WIDERSTAND

1. Die Widerstandseinheit “ Ω ” wird weggelassen.
(K=k Ω =1000 Ω , M=M Ω).
2. Alle Widerstände haben $\pm 5\%$, sofern nicht anders angegeben.
(J= $\pm 5\%$, F= $\pm 1\%$, D= $\pm 0.5\%$)
3. Alle Widerstände haben 1/16W, sofern nicht anders angegeben.
4. Alle Widerstände sind Kohletyp, sofern nicht anders angegeben.
Ⓐ: Fest Ⓣ: Zement
Ⓑ: Oxidefilm Ⓡ: Spezial
Ⓜ: Metallüberzug

KONDENSATOR

1. Die Kapazitätseinheit ist μF , sofern nicht anders angegeben.
(P=pF= $\mu\mu\text{F}$).
2. Alle Kondensatoren haben 50V, sofern nicht anders angegeben.
3. Alle Kondensatoren sind Keramiktyp, sofern nicht anders angegeben.
(ML): Mylar (TA): Tantal
(PF): Polyprofilm (ST): Styrol

ACHTUNG:

bei diesem Schaltplan handelt es sich um den ursprünglichen. Es können daher geringfügige Unterschiede zu dem Ihnen bestehenden.

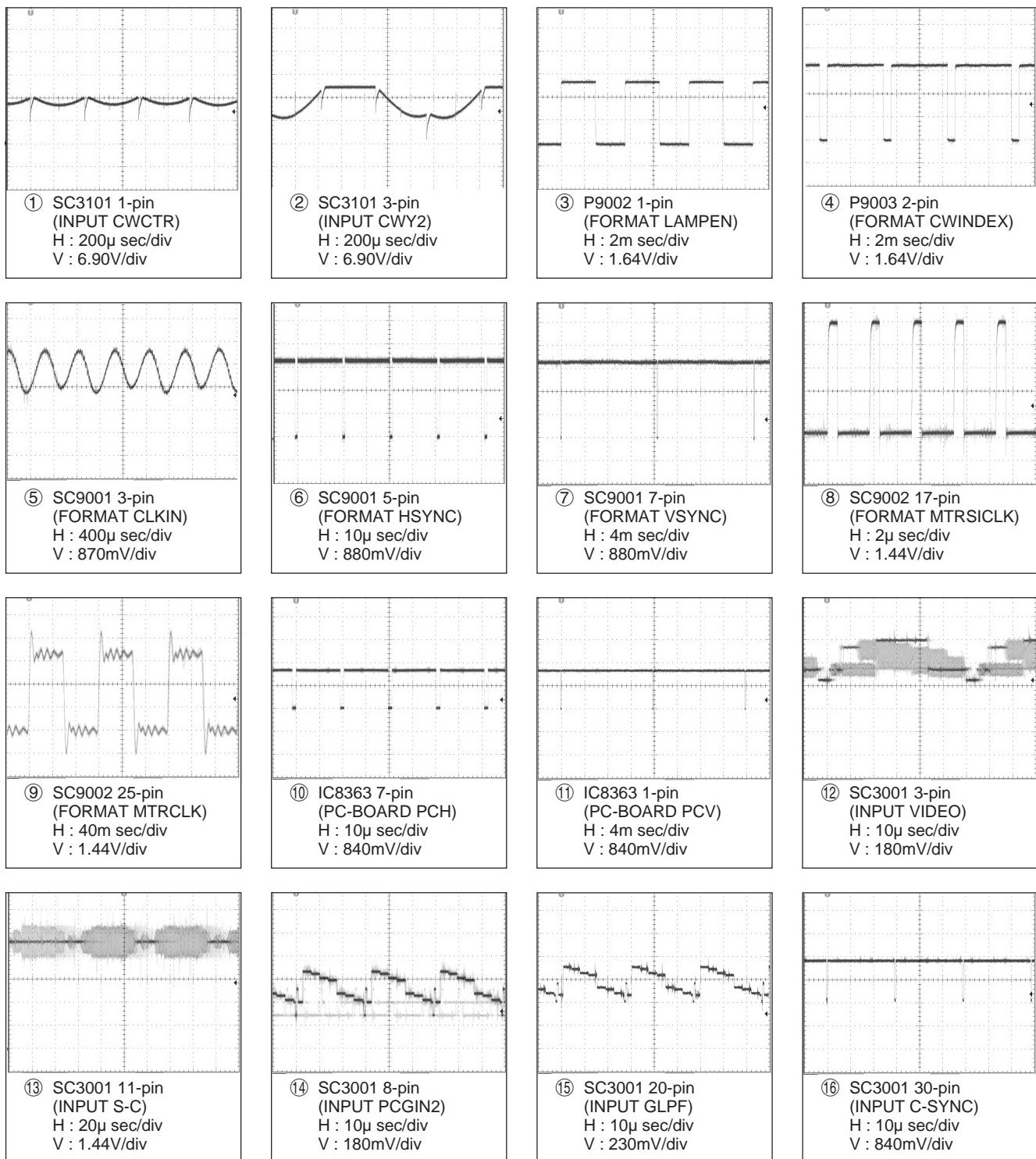
SICHERHEITSANMERKUNGEN:

1. VOR DEM AUSWECHSELN VON TEILEN MUSS UNBEDINGT NETZSTECKER AUS DER NETZSTECKDOSE GEZOGEN WERDEN.
2. DIE WARMEABLEITER DER HALBLEITER SOLLTEN BEIM BETRIEB DES CHASSIS ALS MÖGLICHE URSACHEN VON GEFAHRLICHEN ELEKTRISCHEN SCHLÄGEN BETRACHTET WERDEN.

WICHTIGE SICHERHEITSANMERKUNGEN:

MIT “⚠ ([REDACTED]) BEZEICHNETEN TEILE SIND BESONDERS WICHTIG FÜR DIE AUFRICHTERHALTUNG DER SICHERHEIT. BEIM WECHSELN SOLLTEN DIE VORGESCHRIEBENEN TEILE IMMER VERWENDET WERDEN, UM SOWOHL DIE SICHERHEIT ALS AUCH DIE LEISTUNG DES GERÄTES AUFRICHTZUERHALTEN.

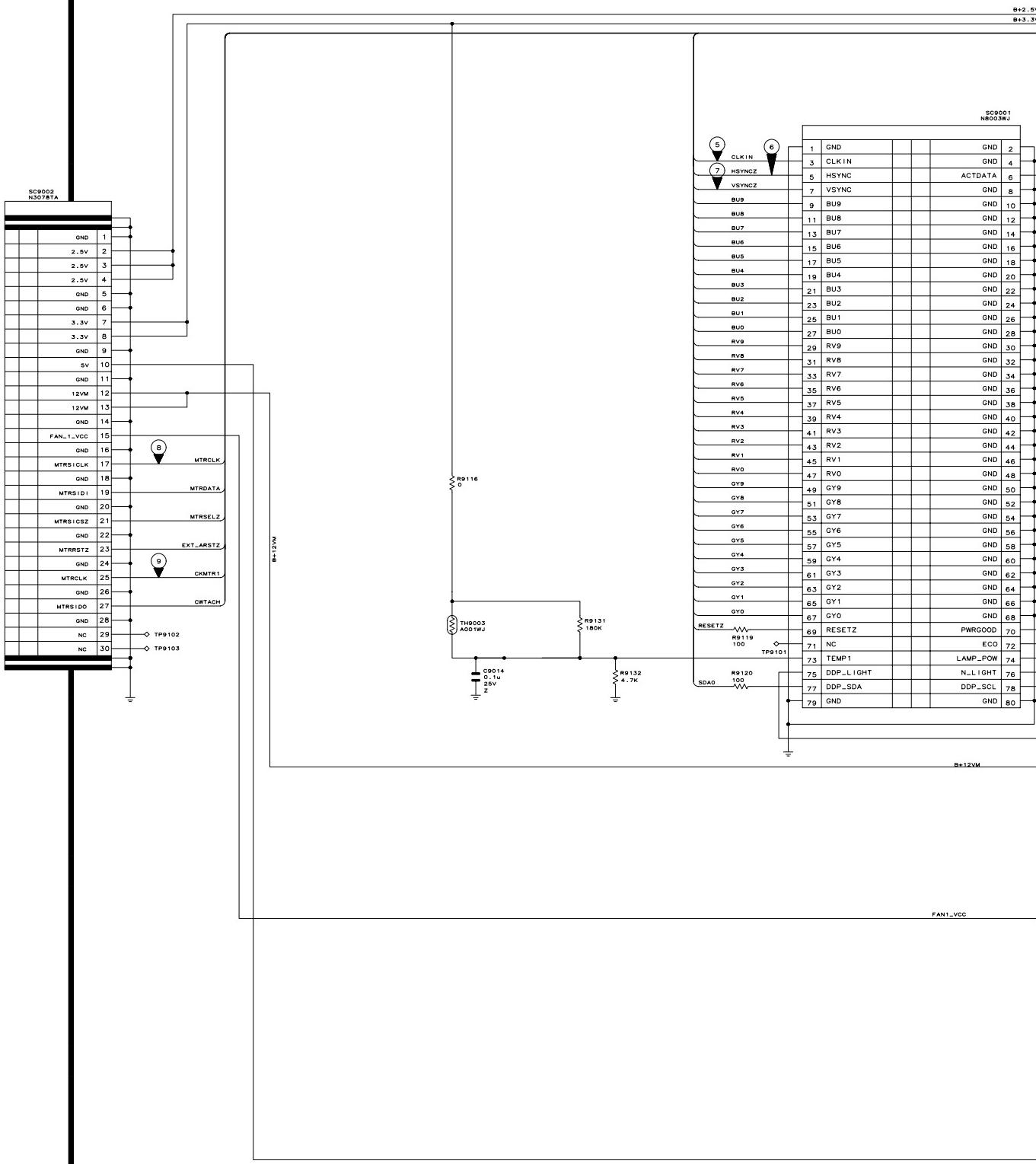
WAVEFORMS/WELLENFORMEN



■ FORMATTER UNIT-1/5 / FORMATIERER EINHEIT-1/5

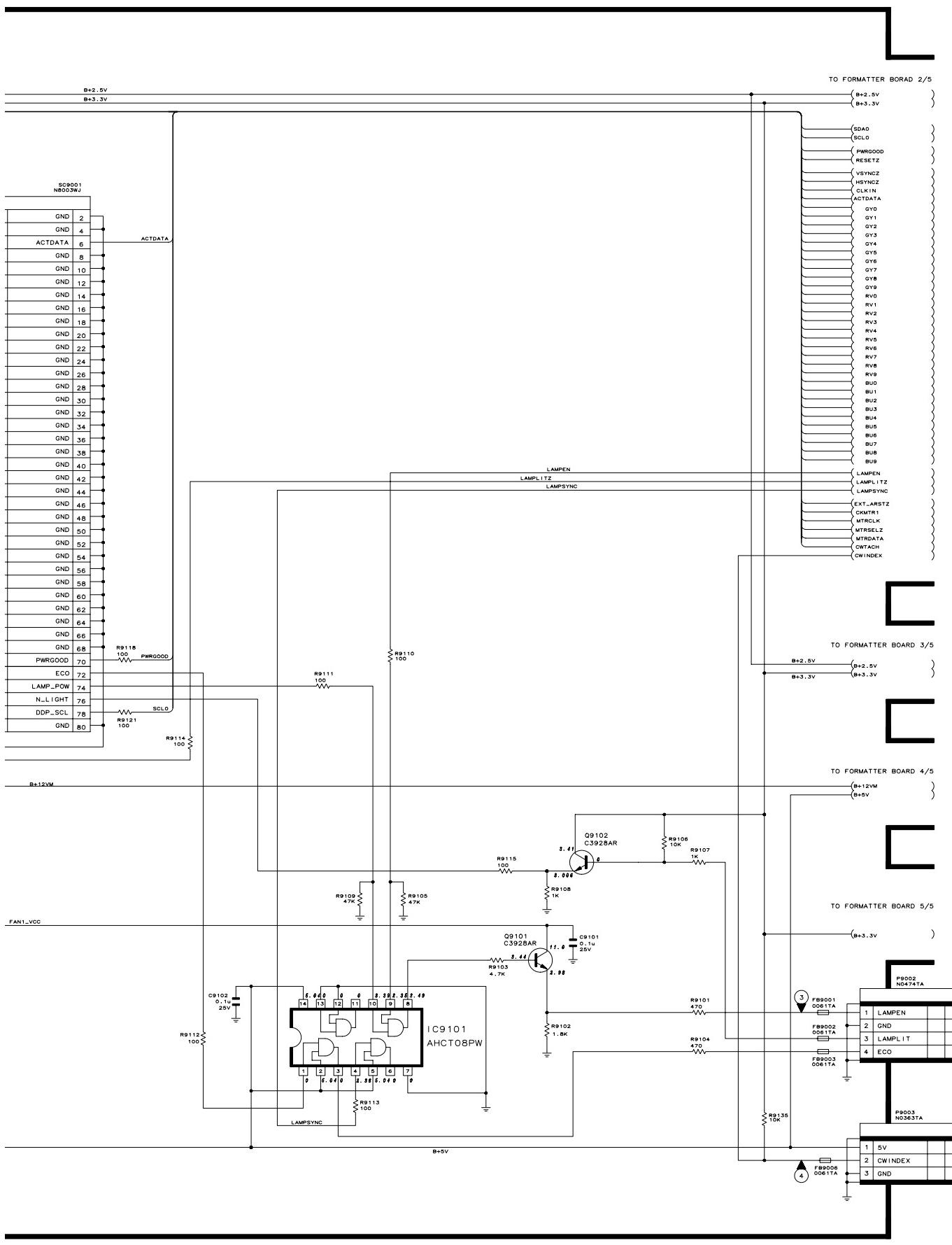
FORMATTER BOARD (1/5)

H
G
F
E
D
C
B
A



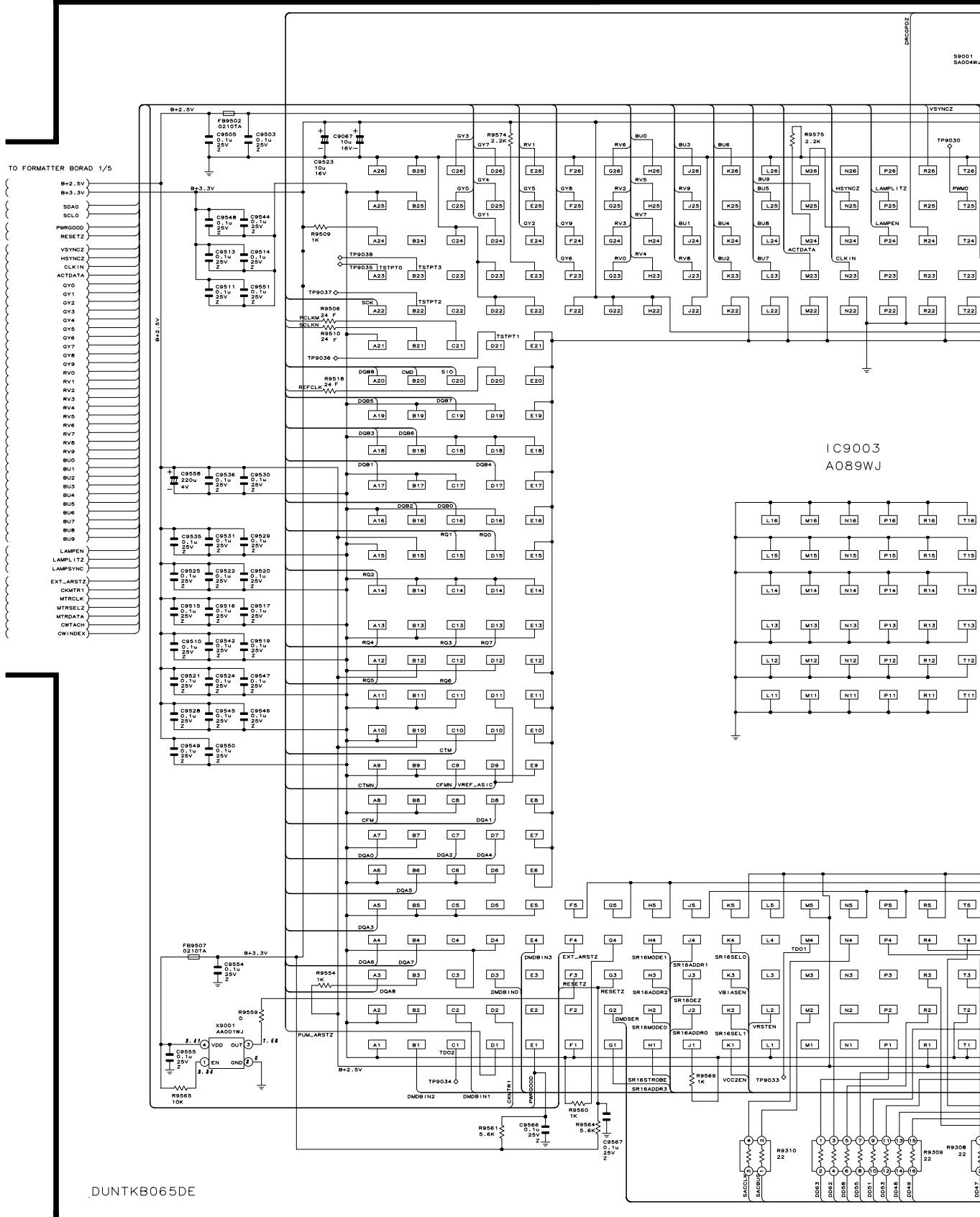
DUNTKB065DE

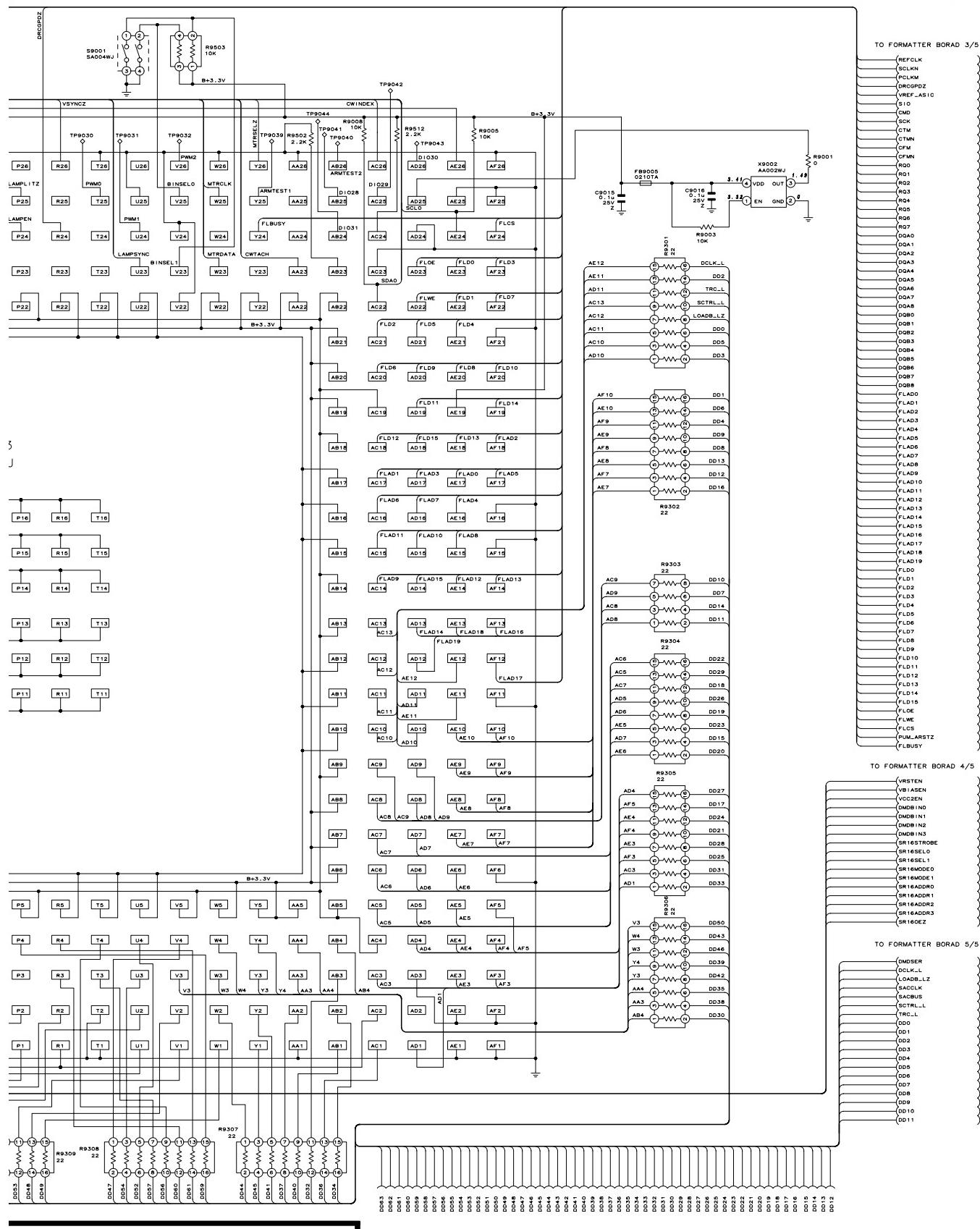
1	2	3	4	5	6	7	8	9	10
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■ FORMATTER UNIT-2/5 / FORMATIERER EINHEIT-2/5

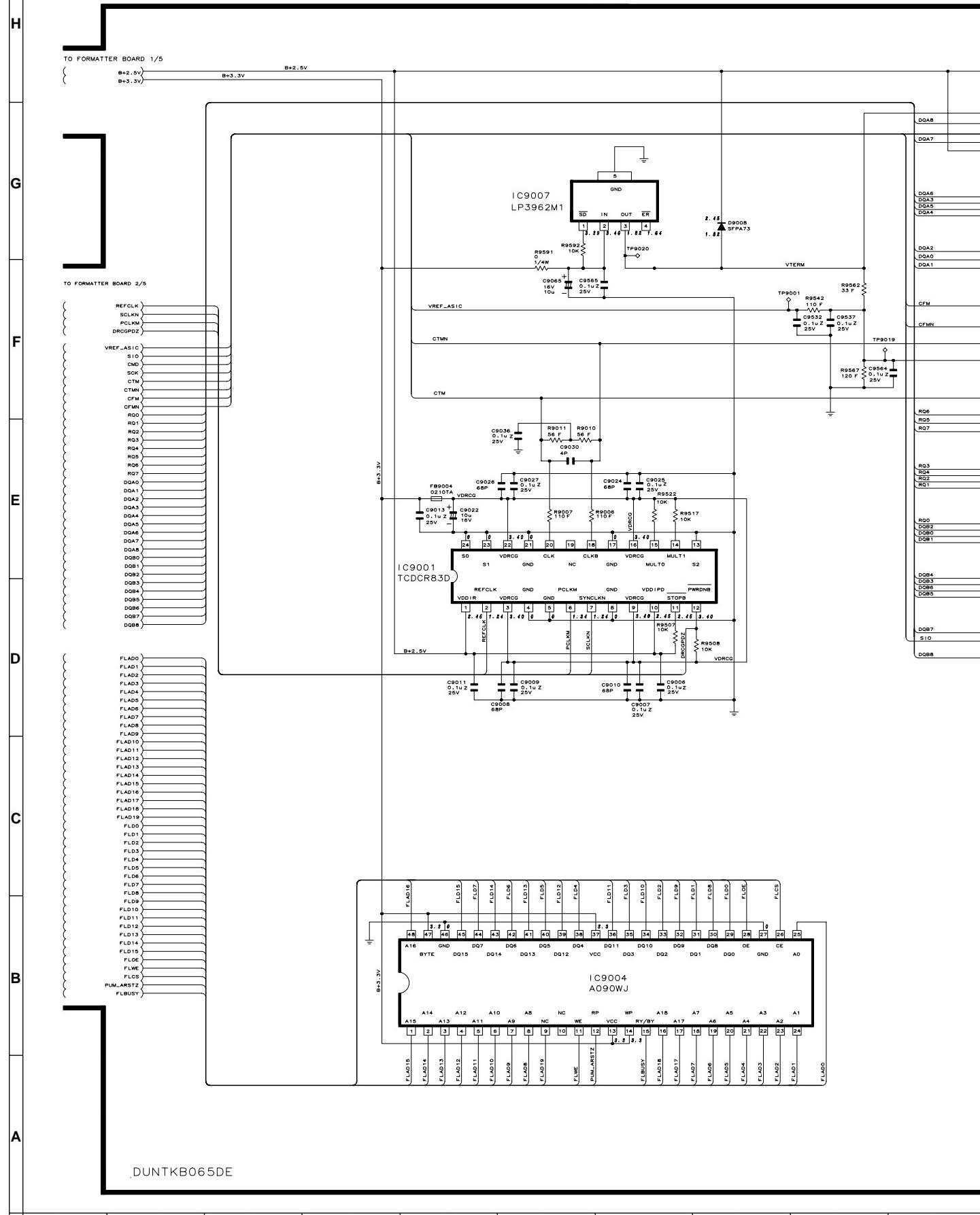
FORMATTER BOARD (2/5)

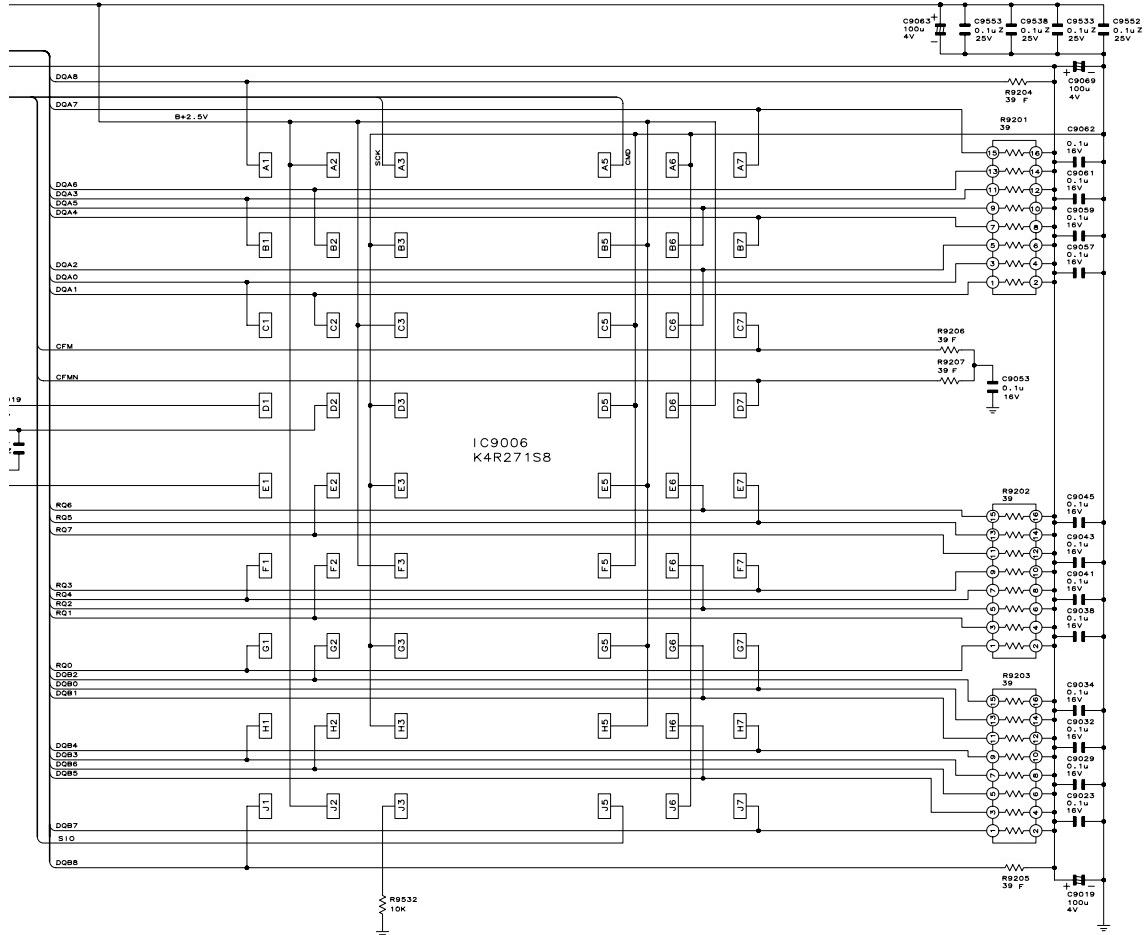




■ FORMATTER UNIT-3/5 / FORMATIERER EINHEIT-3/5

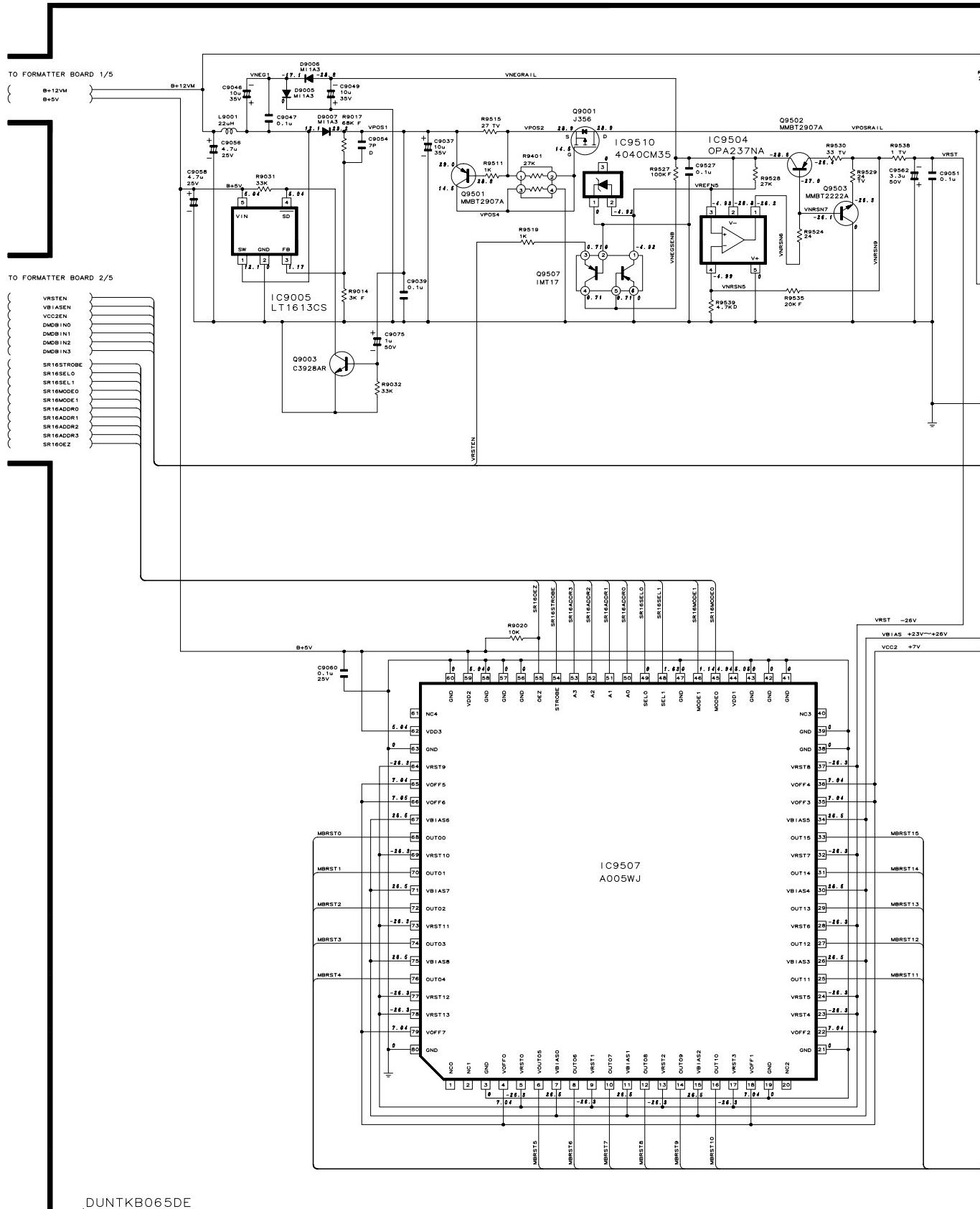
FORMATTER BOARD (3/5)

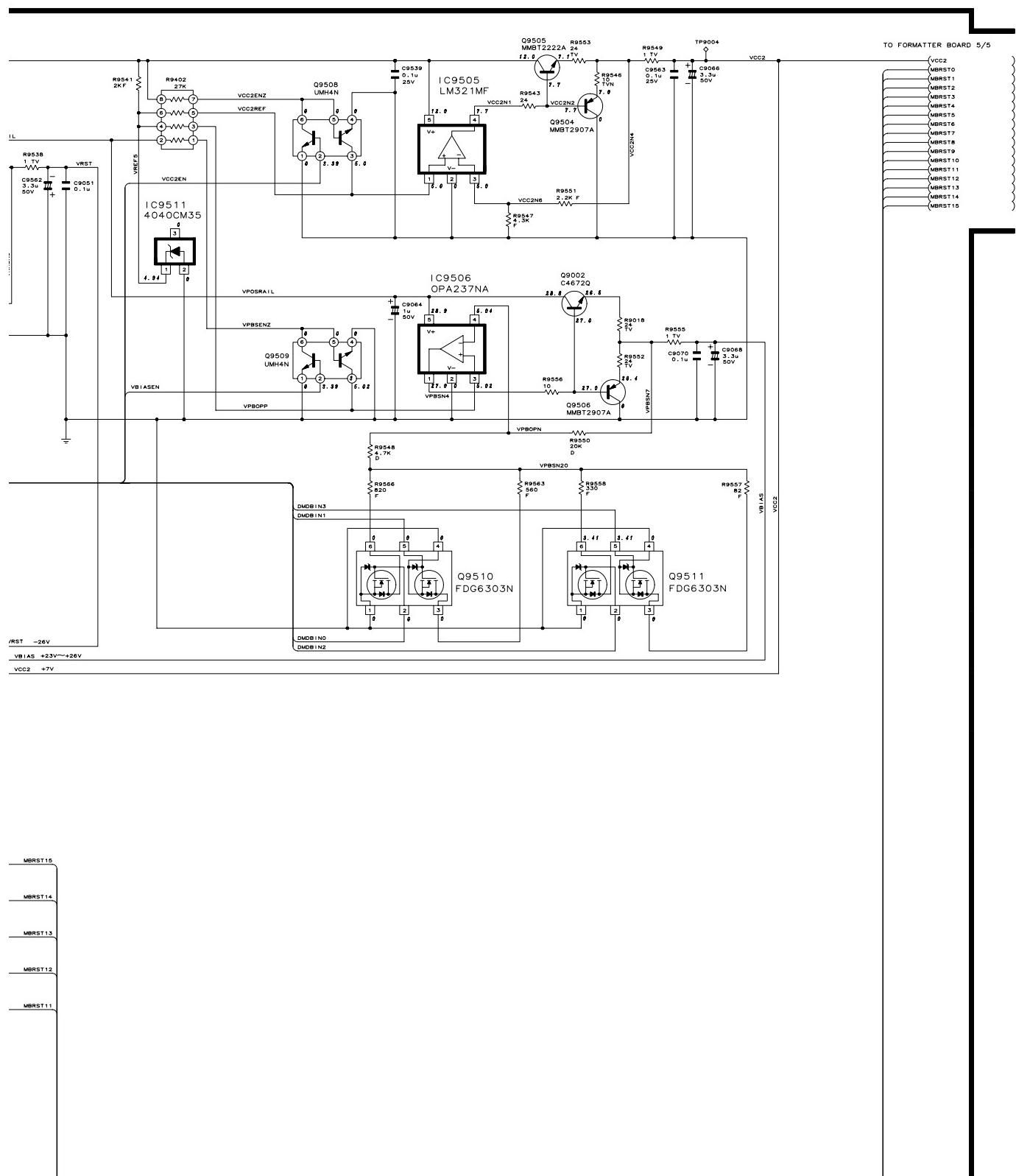




■ FORMATTER UNIT-4/5 / FORMATIERER EINHEIT-4/5

FORMATTER BOARD (4/5)





■ FORMATTER UNIT-5/5 / FORMATIERER EINHEIT-5/5

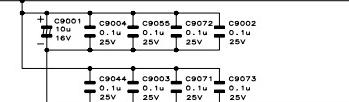
FORMATTER BOARD (5/5)

H

TO FORMATTER BOARD 1/5

(B+3.3V)

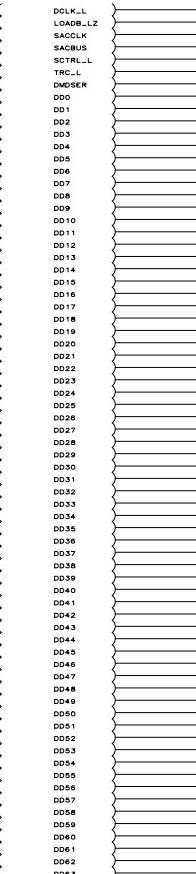
B+3.3V



I C9502
0.7" XGA DMD DDR (20X)
0.55" SVGA DMD DDR (20S)

G

TO FORMATTER BOARD 2/5



F

E

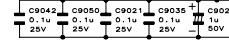
D

C

TO FORMATTER BOARD 4/5

(VCC2)

VCC2

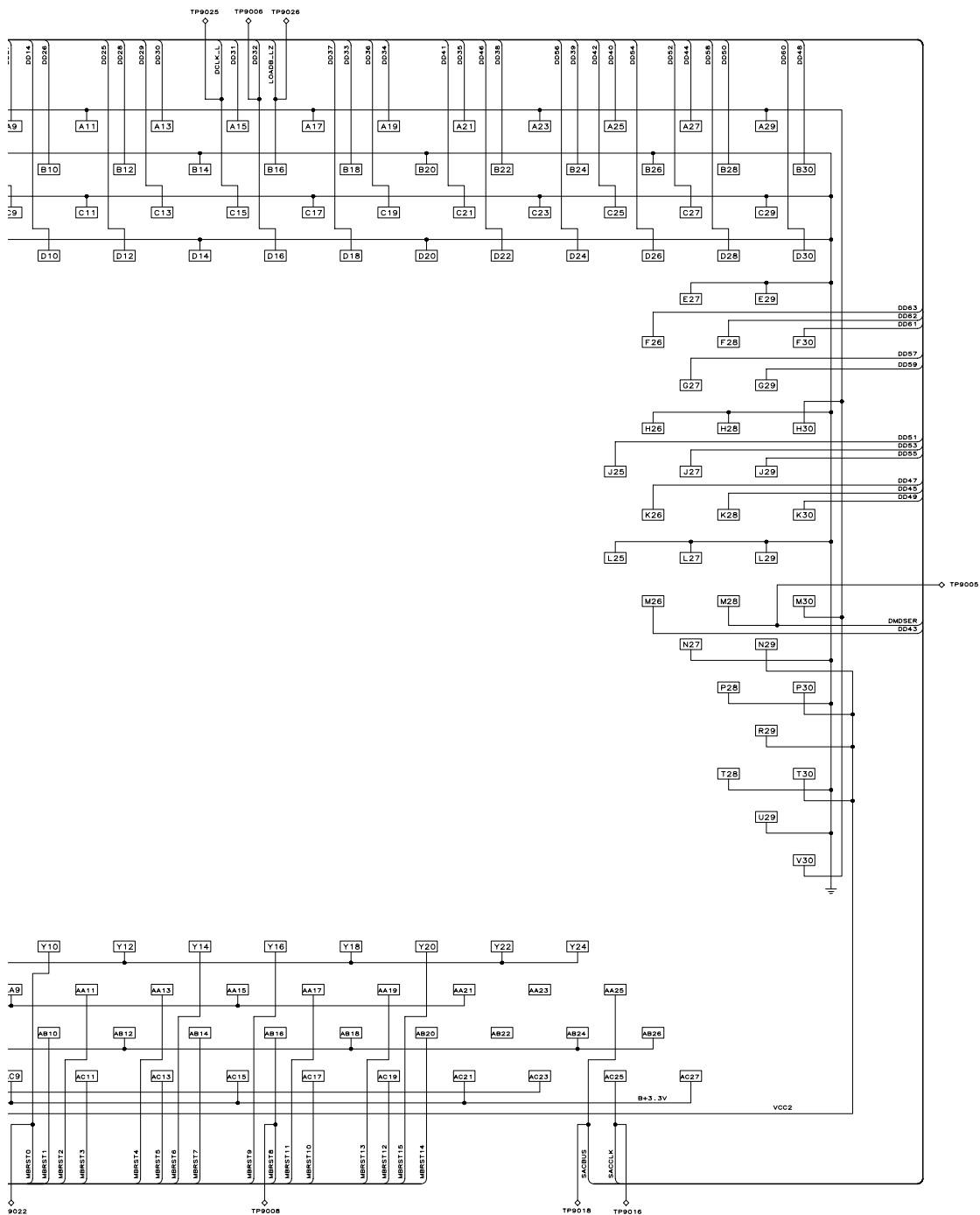


TP9022

DUNTKB065DE

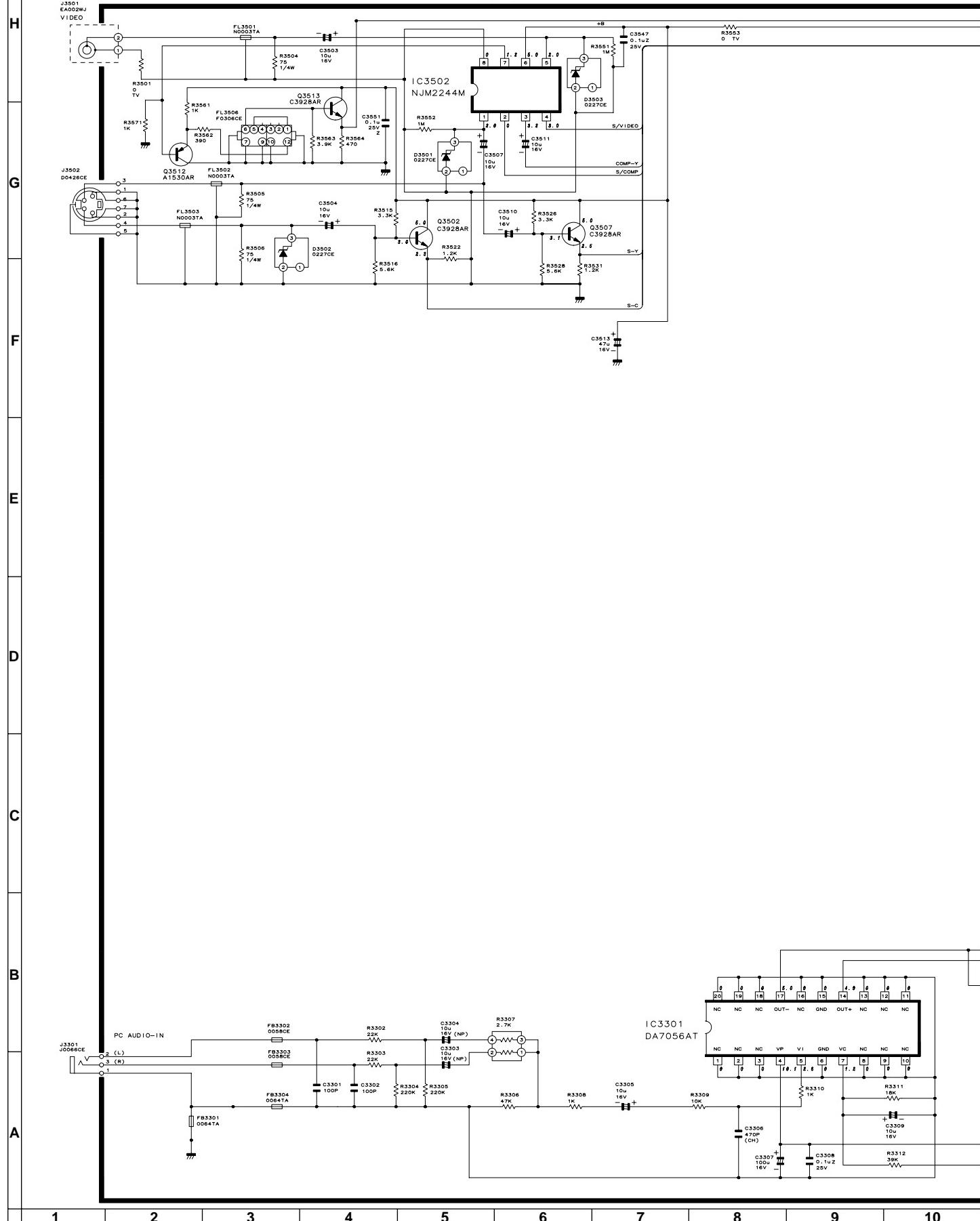
B

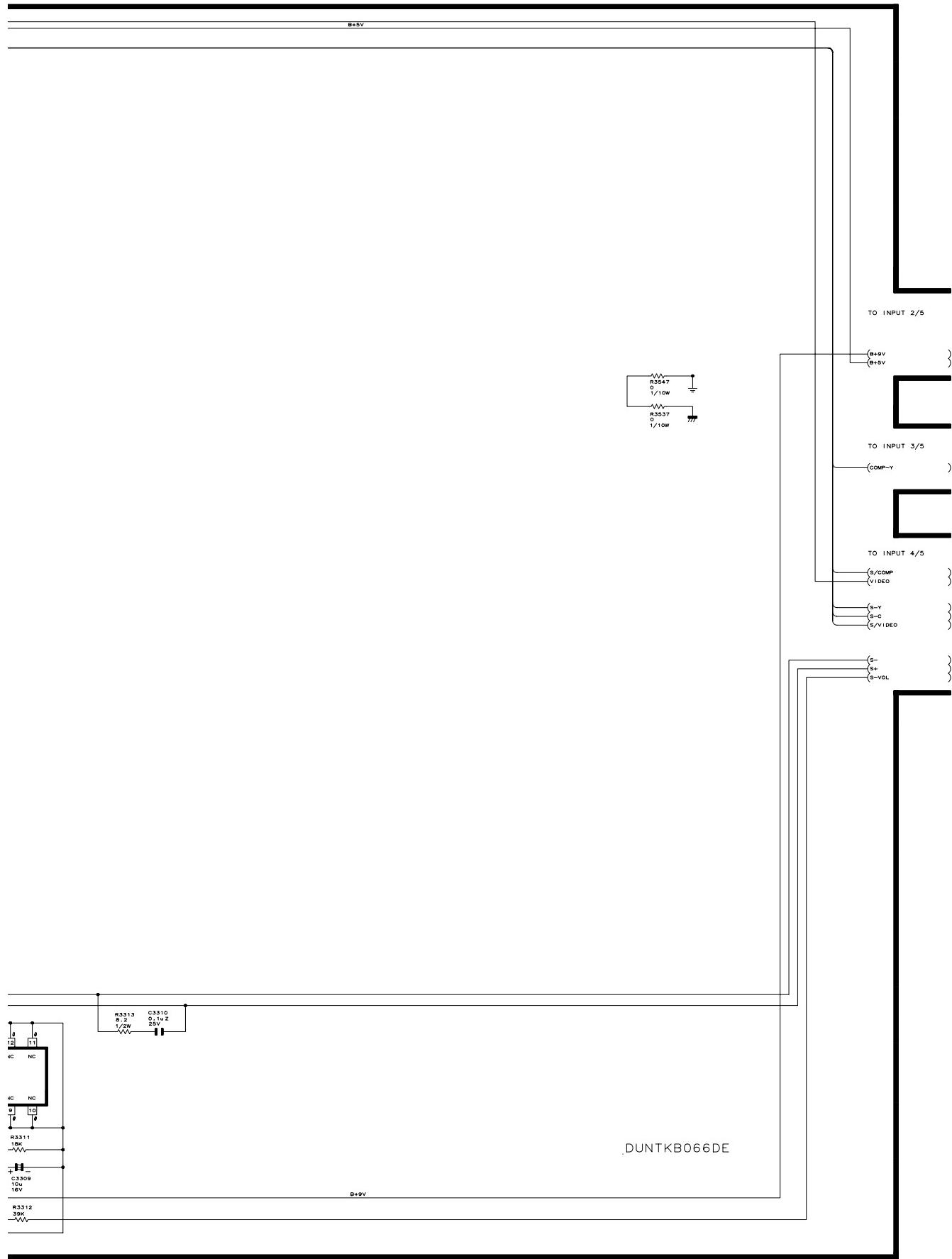
A



■ INPUT UNIT-1/5 / EINGANGSEINHEIT-1/5

INPUT (1/5)





■ INPUT UNIT-2/5 / EINGANGSEINHEIT-2/5

INPUT (2/5)

H

G

F

E

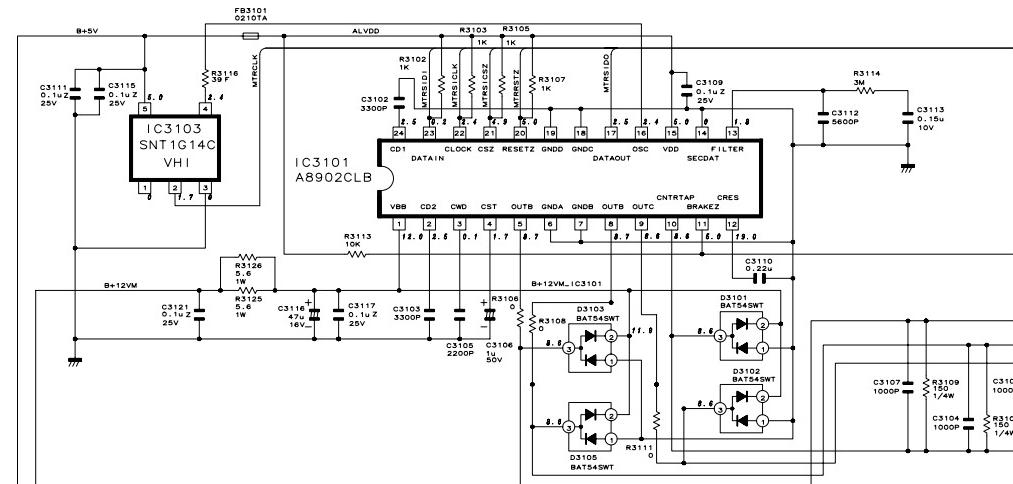
D

C

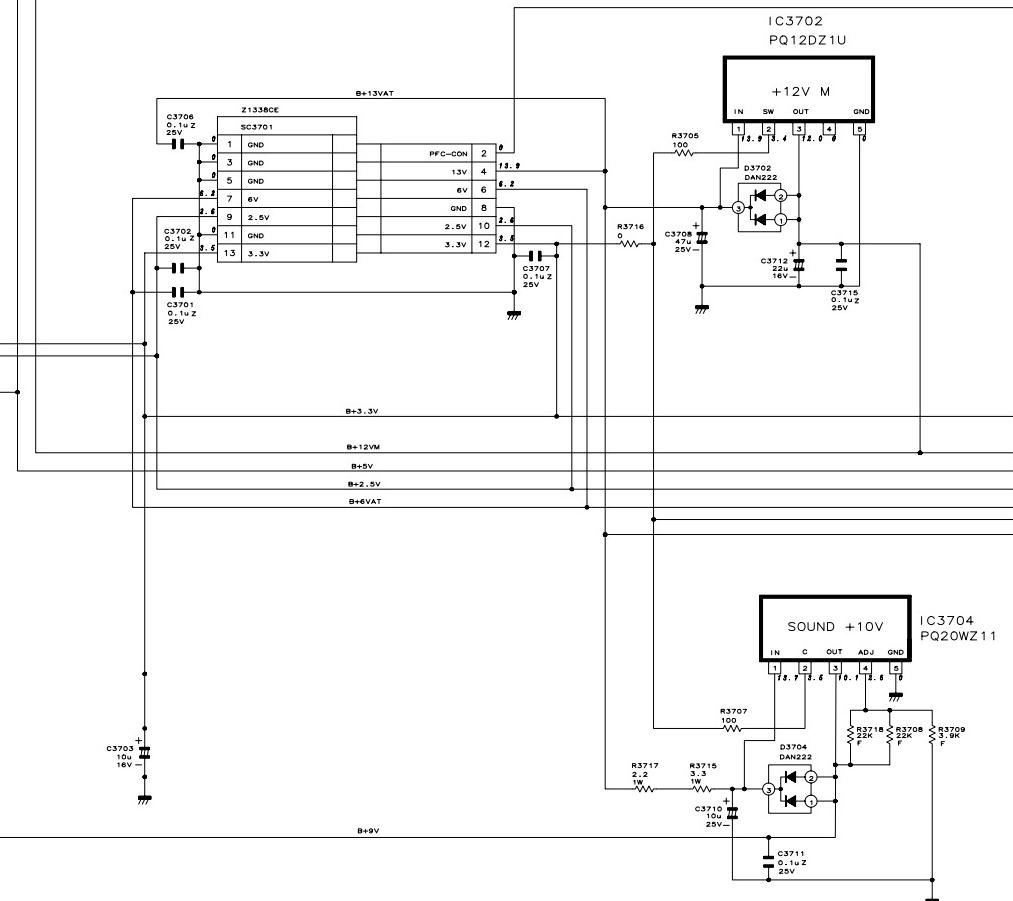
B

A

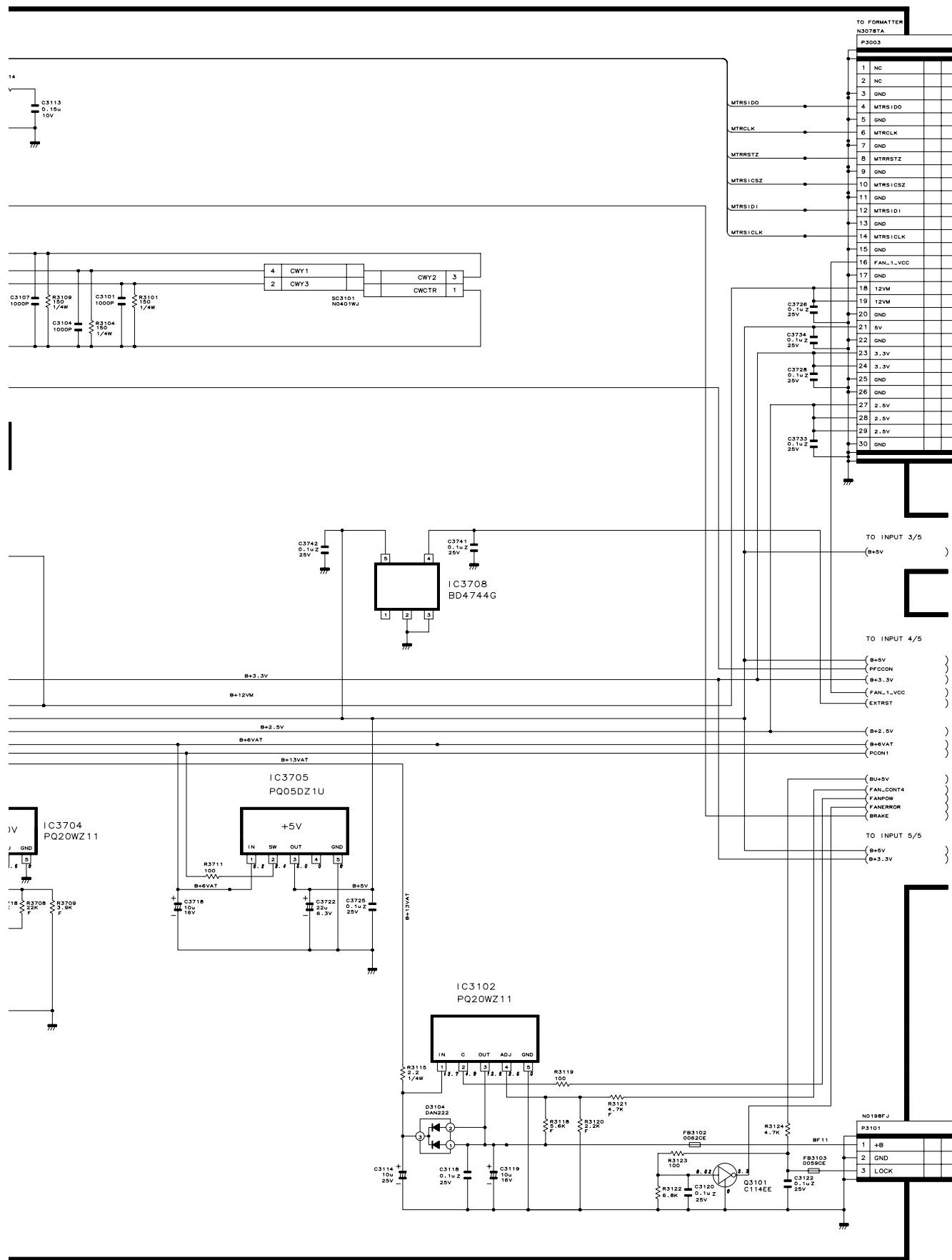
DUNTKB066DE



IC3702
PQ12DZ1U

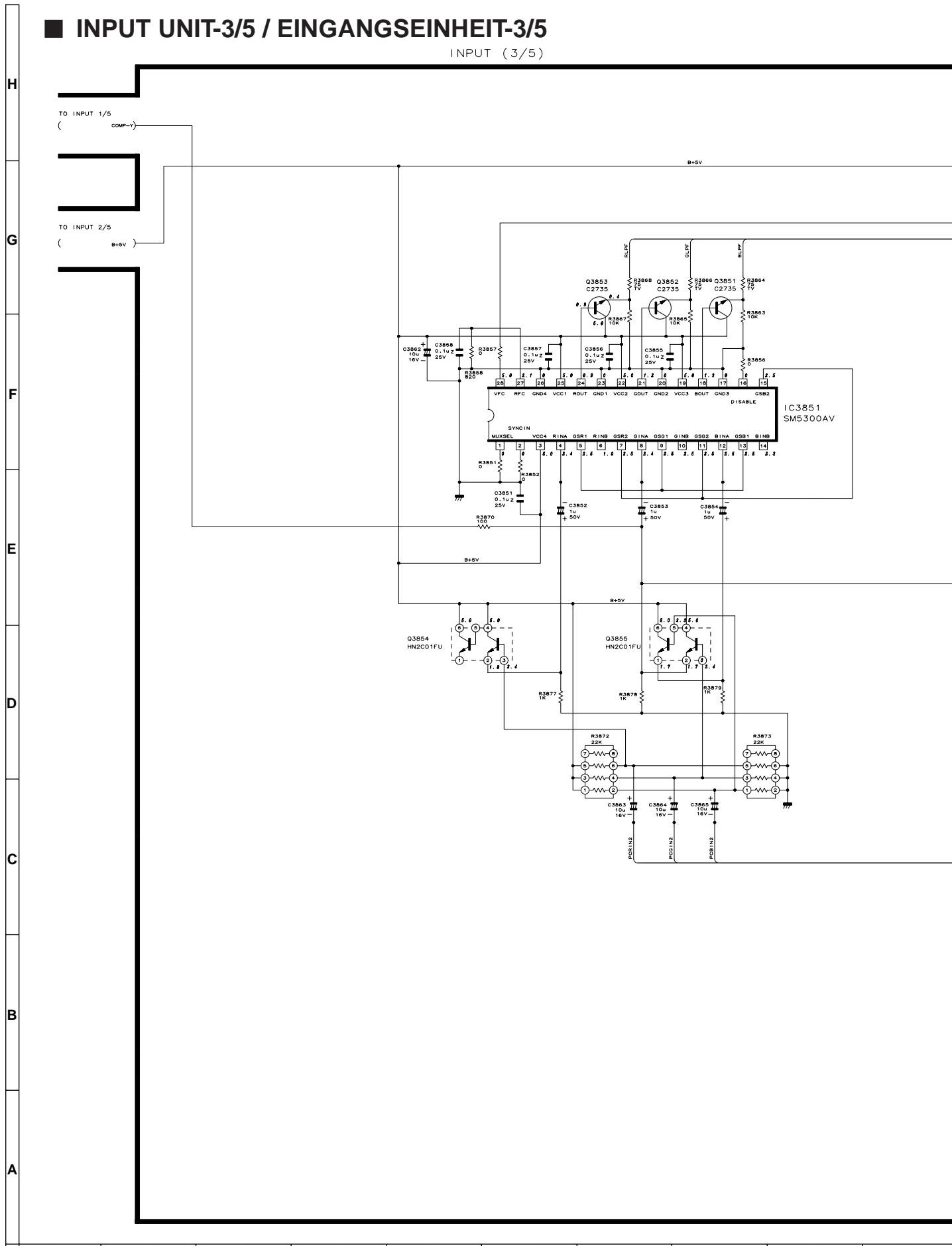


1	2	3	4	5	6	7	8	9	10
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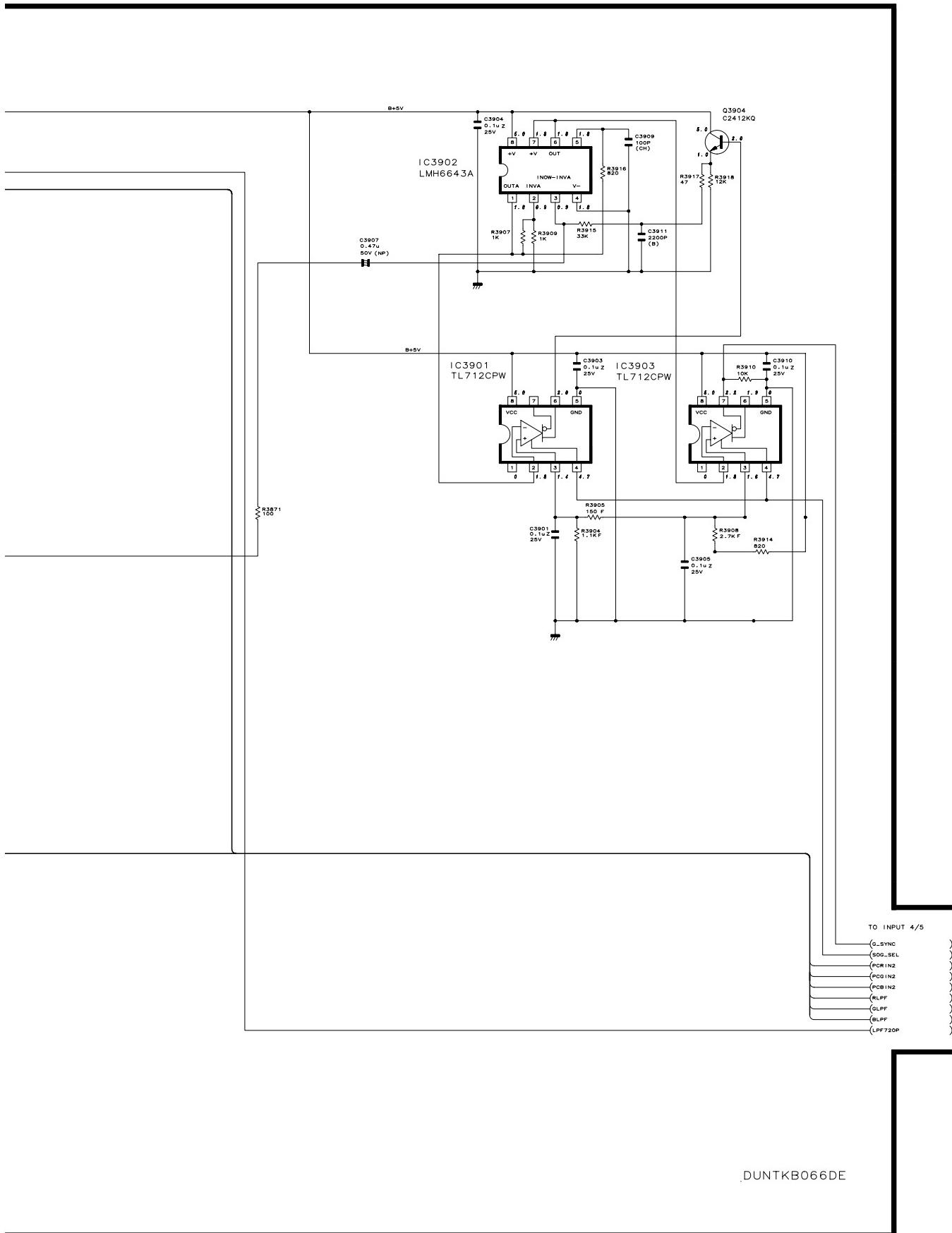


■ INPUT UNIT-3/5 / EINGANGSEINHEIT-3/5

INPUT (3/5)

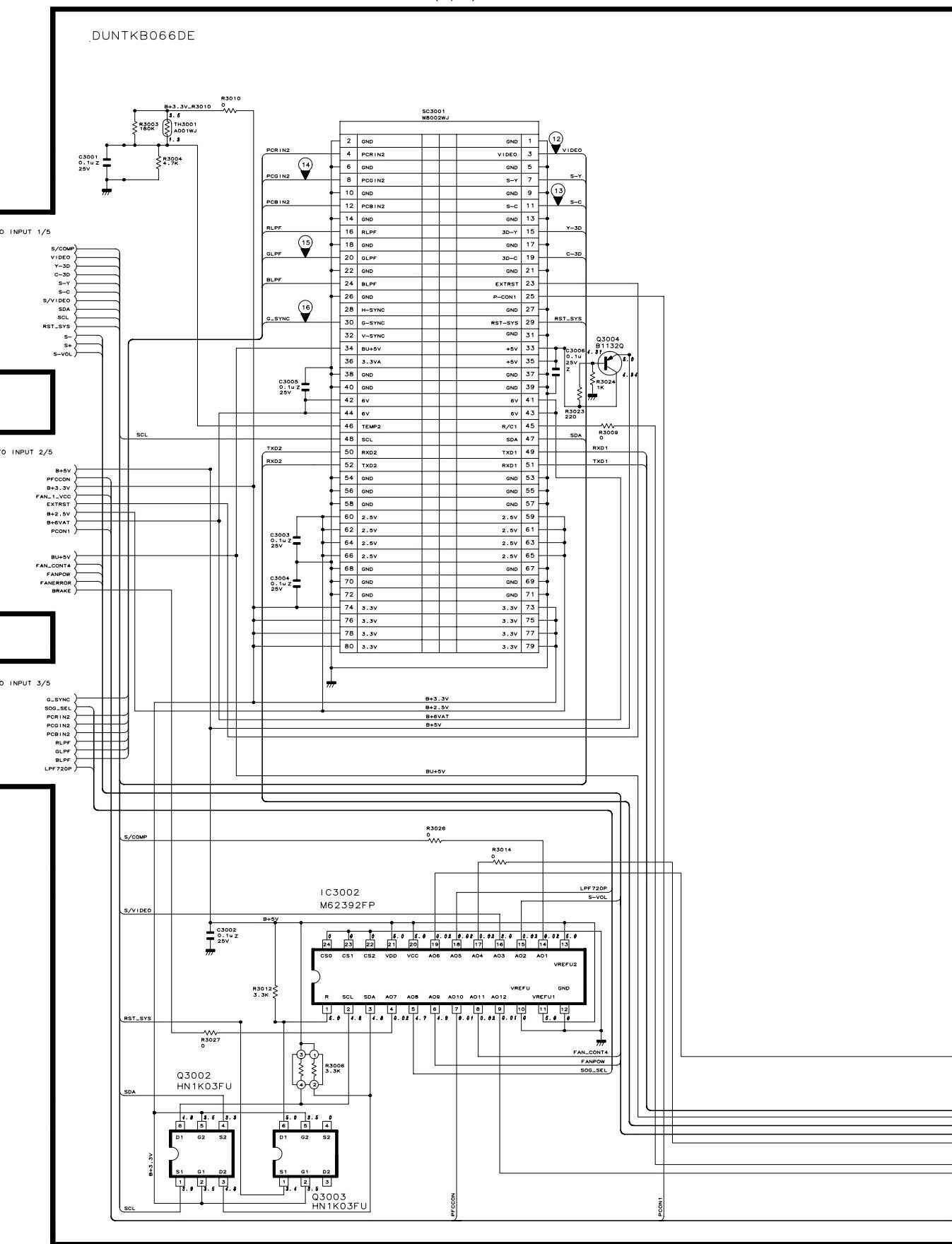


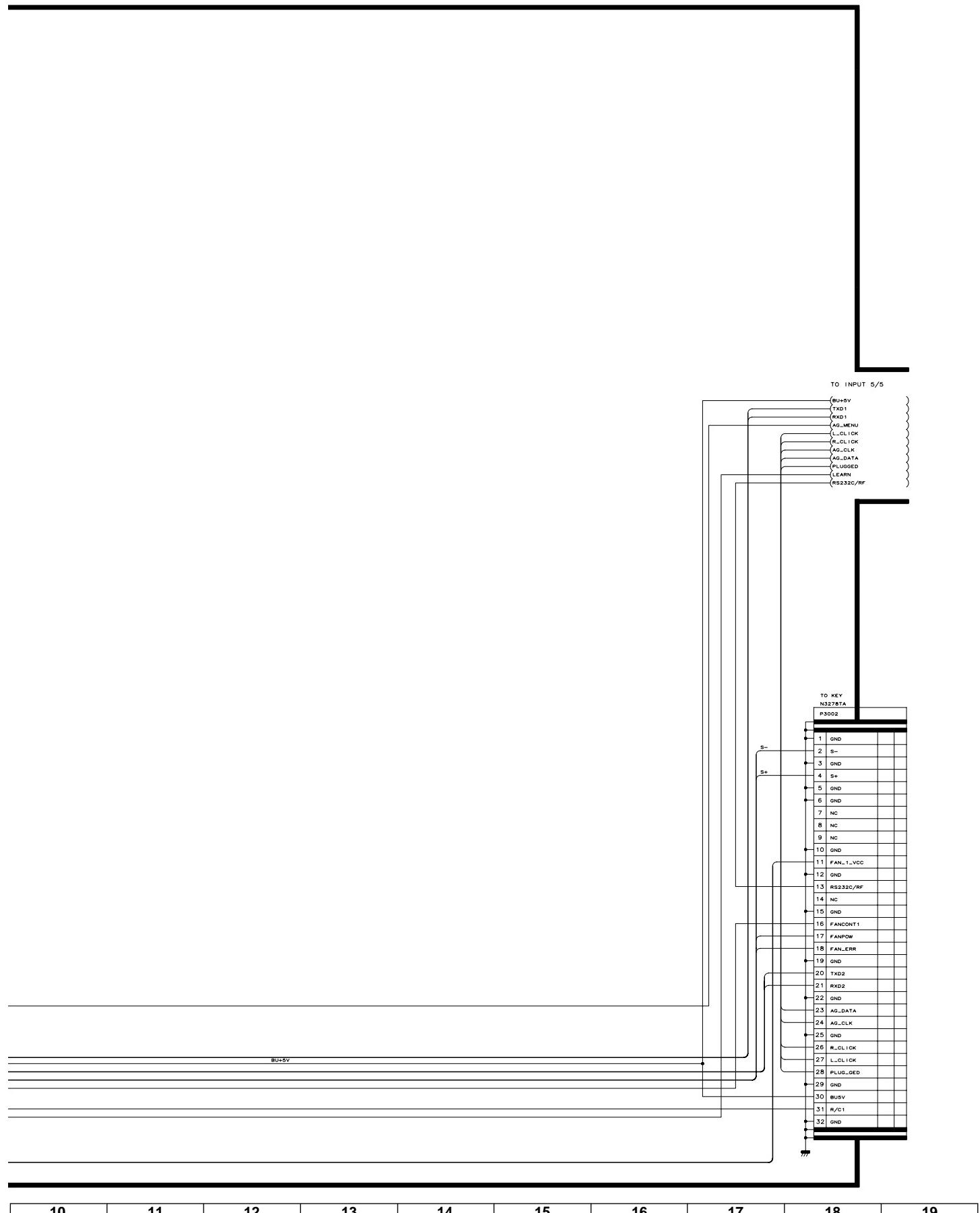
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■ INPUT UNIT-4/5 / EINGANGSEINHEIT-4/5

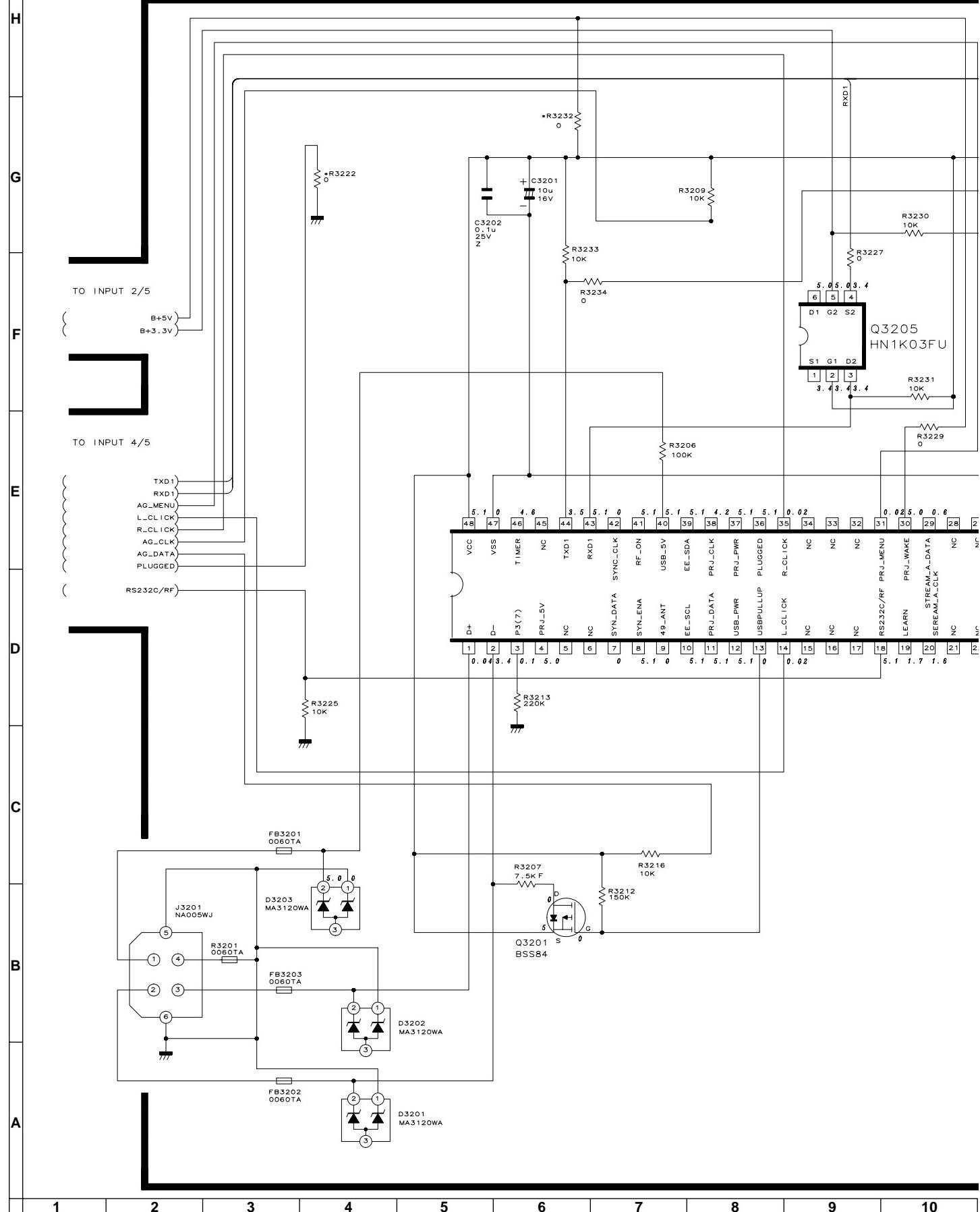
INPUT (4/5)

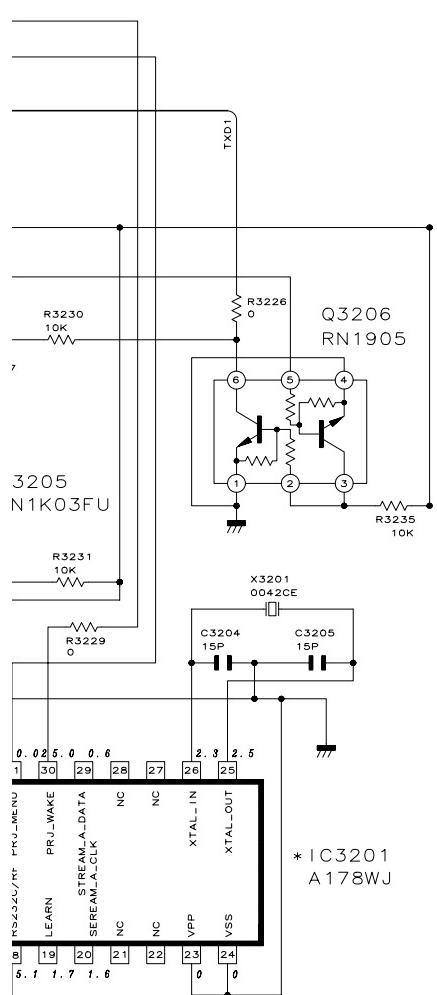




■ INPUT UNIT-5/5 / EINGANGSEINHEIT-5/5

INPUT (5/5)





DUNTKB066DE

■ KEY UNIT-1/3 / SCHLÜSSELEINHEIT-1/3

KEY (1/3)

H

G

F

E

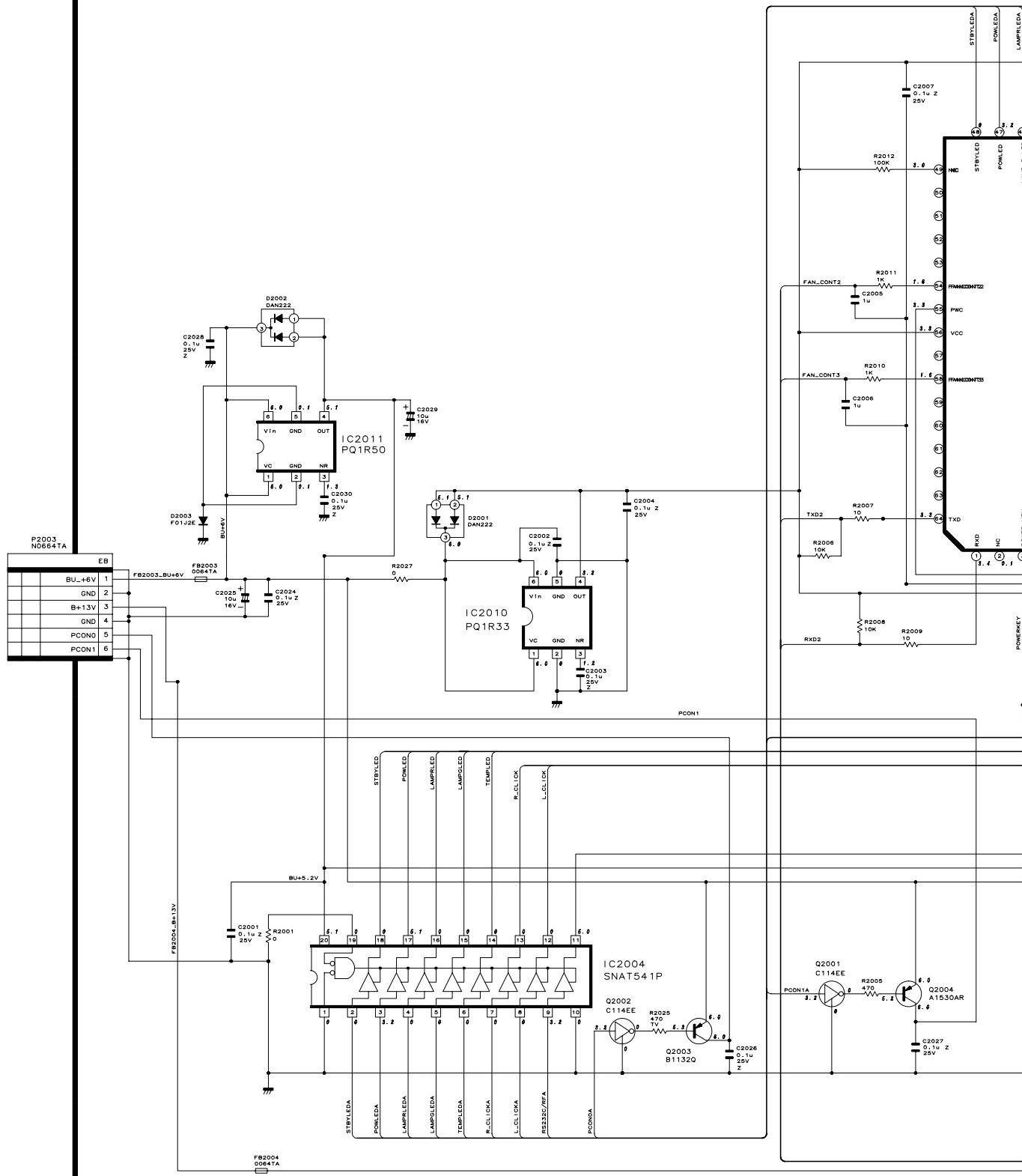
D

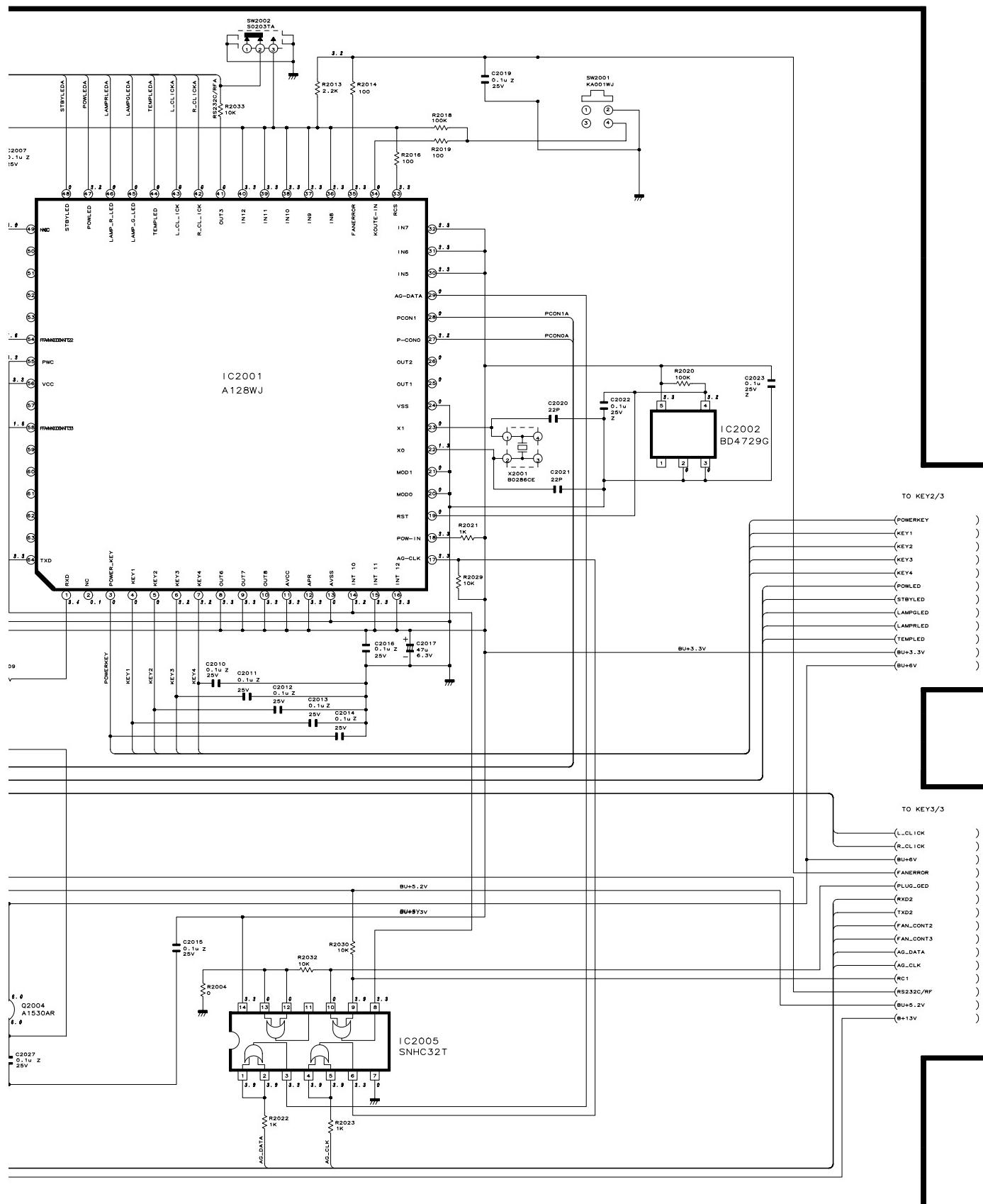
C

B

A

DUNTKB067DE





■ KEY UNIT-2/3 / SCHLÜSSELEINHEIT-2/3

KEY (2/3)

H

G

F

E

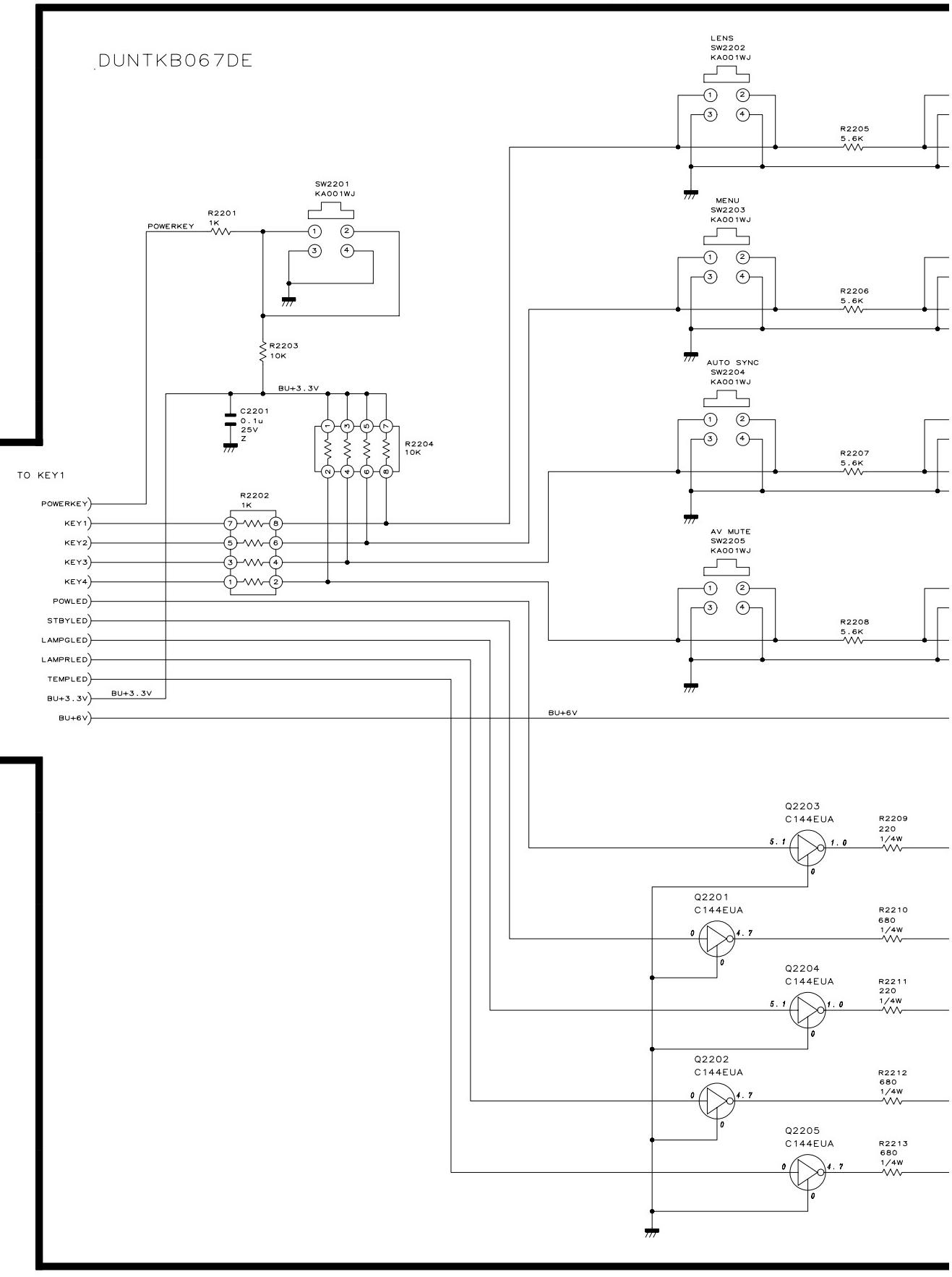
D

C

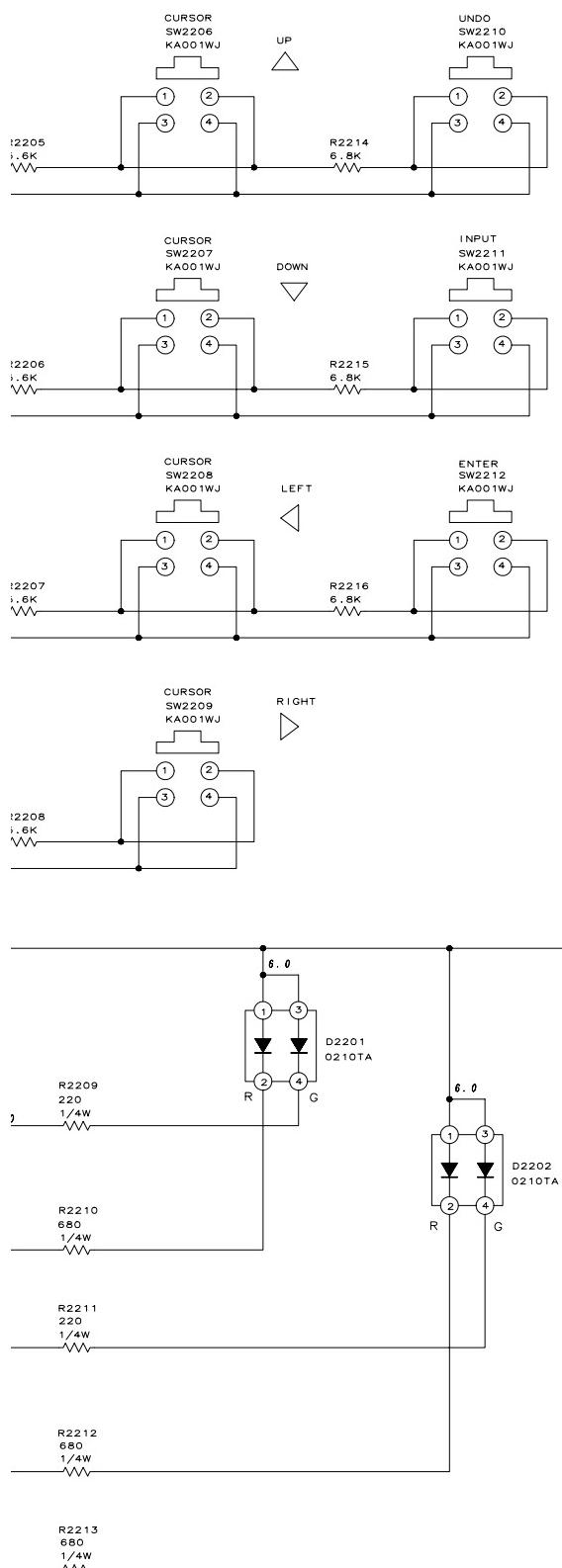
B

A

DUNTKB067DE



1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----



■ KEY UNIT-3/3 / SCHLÜSSELEINHEIT-3/3

KEY (3/3)

H

DUNTKB067DE

G

TO KEY1/3

F

(L_CLICK)
 (R_CLICK)
 (BU+6V)
 (FAN_ERROR)
 (PLUG_GED)
 (RXD2)
 (TXD2)
 (FAN_CONT2)
 (FAN_CONT3)
 (AG_DATA)
 (AG_CLK)
 (RC1)
 (RS232C/RF)
 (BU+5.2V)
 (B+13V)

E

N3271TA
P2001 KY

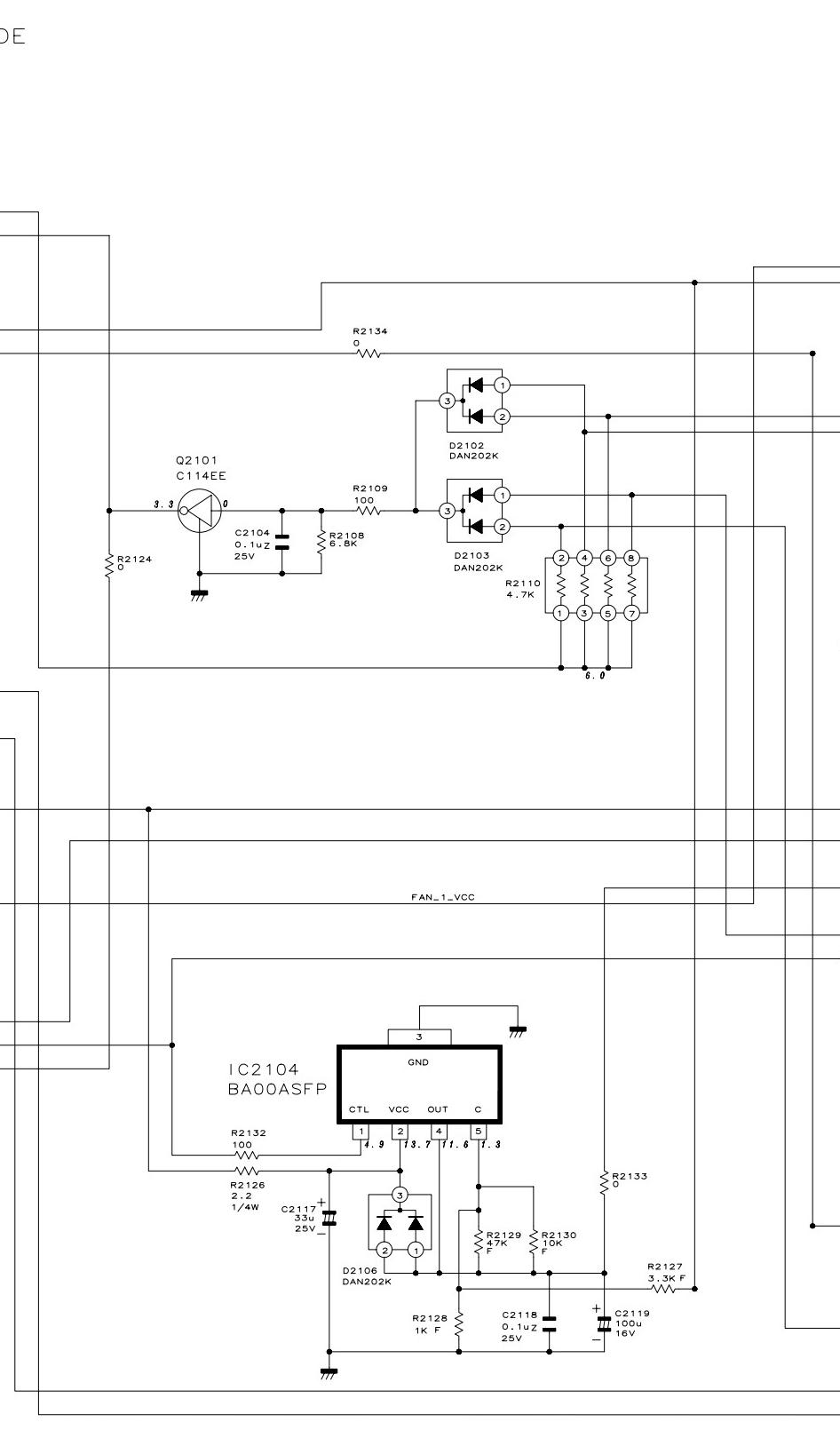
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	S-	2
	GND	3
	S+	4
	GND	5
	GND	6
	NC	7
	NC	8
	NC	9
	GND	10
	FAN_1_VCC	11
	GND	12
	RS232C/RF	13
	NC	14
	GND	15
	FAN_CONT1	16
	FANPOW	17
	FAN_ERR	18
	GND	19
	TXD2	20
	RXD2	21
	GND	22
	AG_DATA	23
	AG_CLK	24
	GND	25
	R_CLICK	26
	L_CLICK	27
	PLUG_GED	28
	GND	29
	BU+5.2V	30
	R/C1	31
	GND	32

D

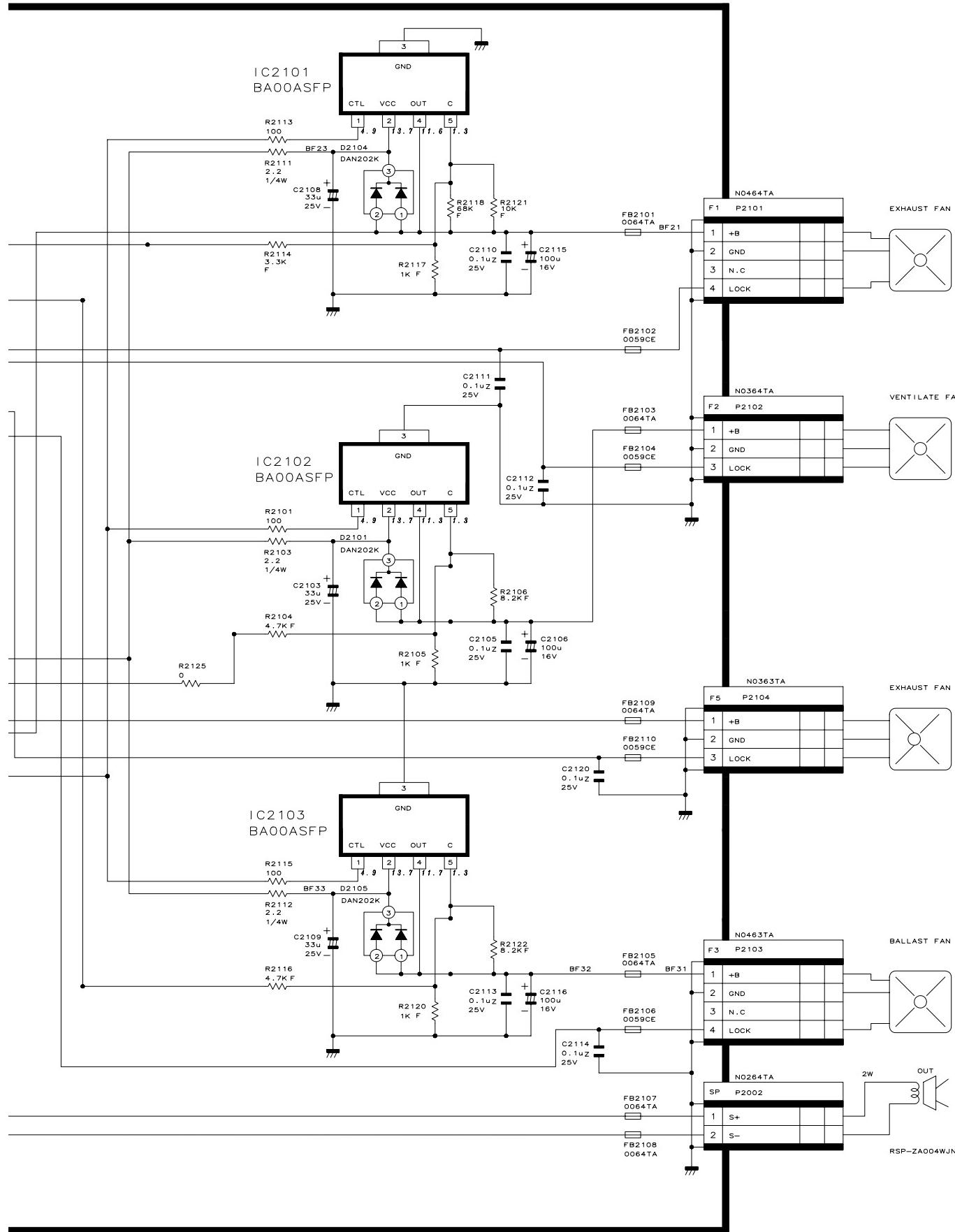
C

B

A



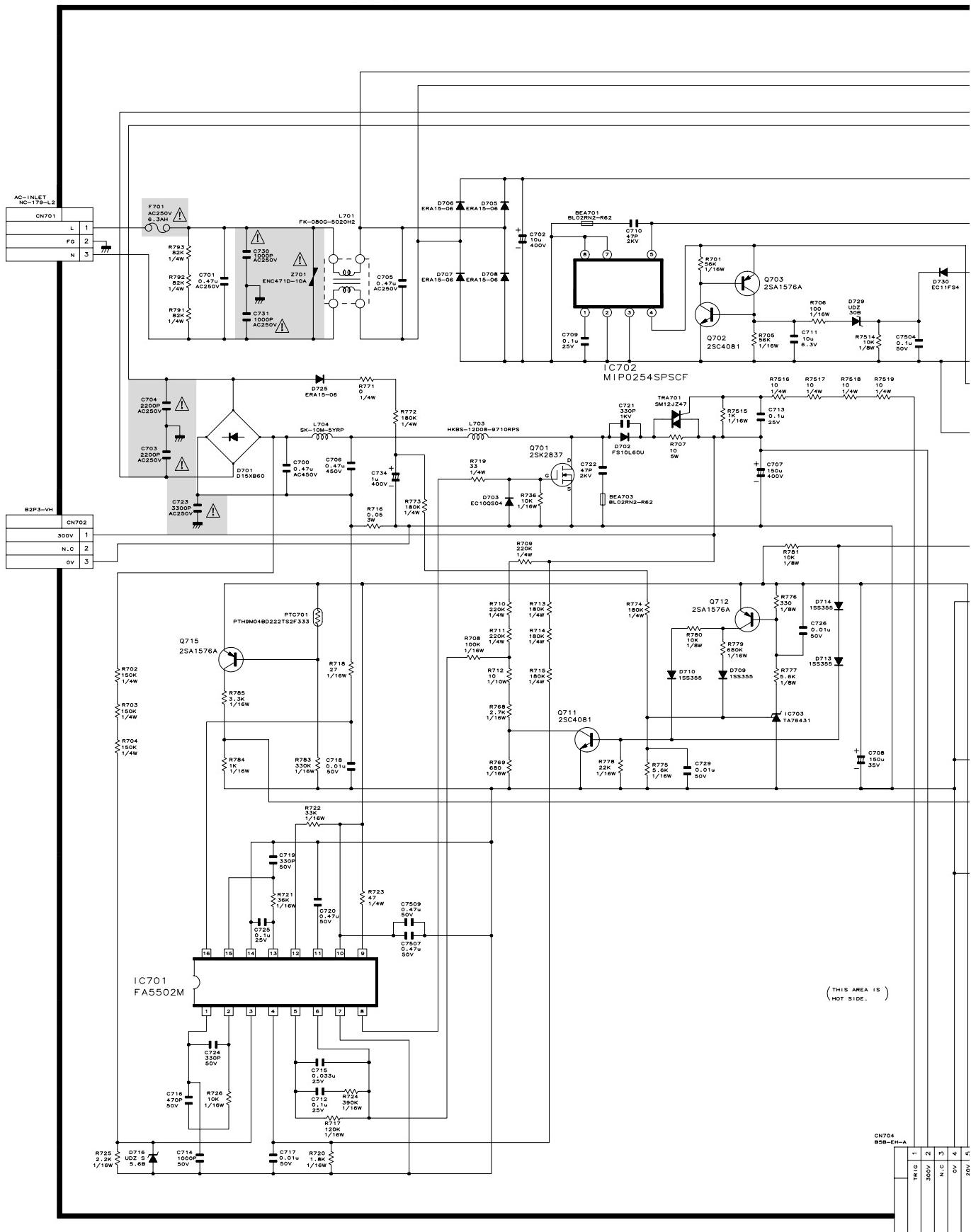
1 2 3 4 5 6 7 8 9 10

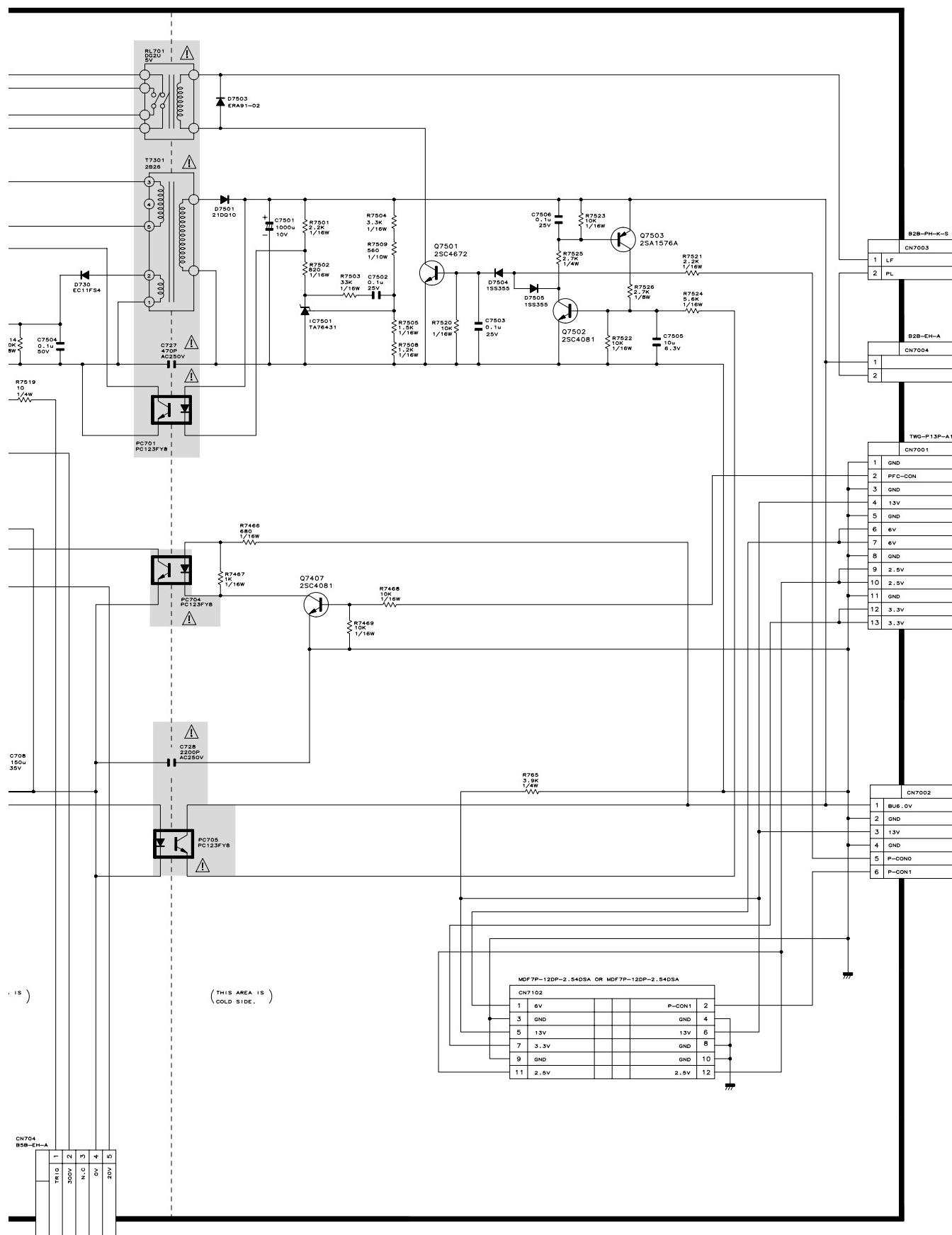


■ PFC UNIT / PFC-EINHEIT

DEN(1/2)

RDENCA004WJ

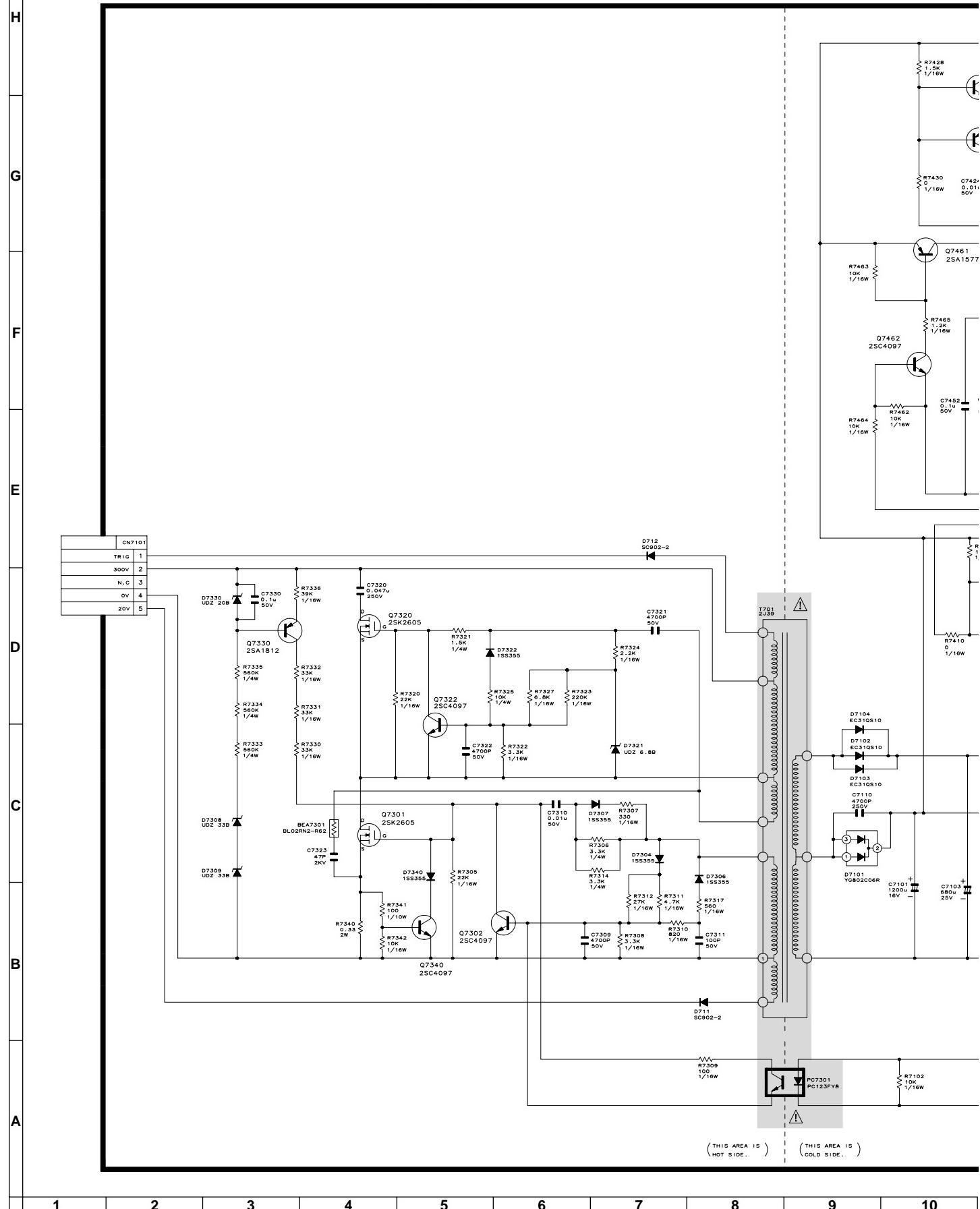


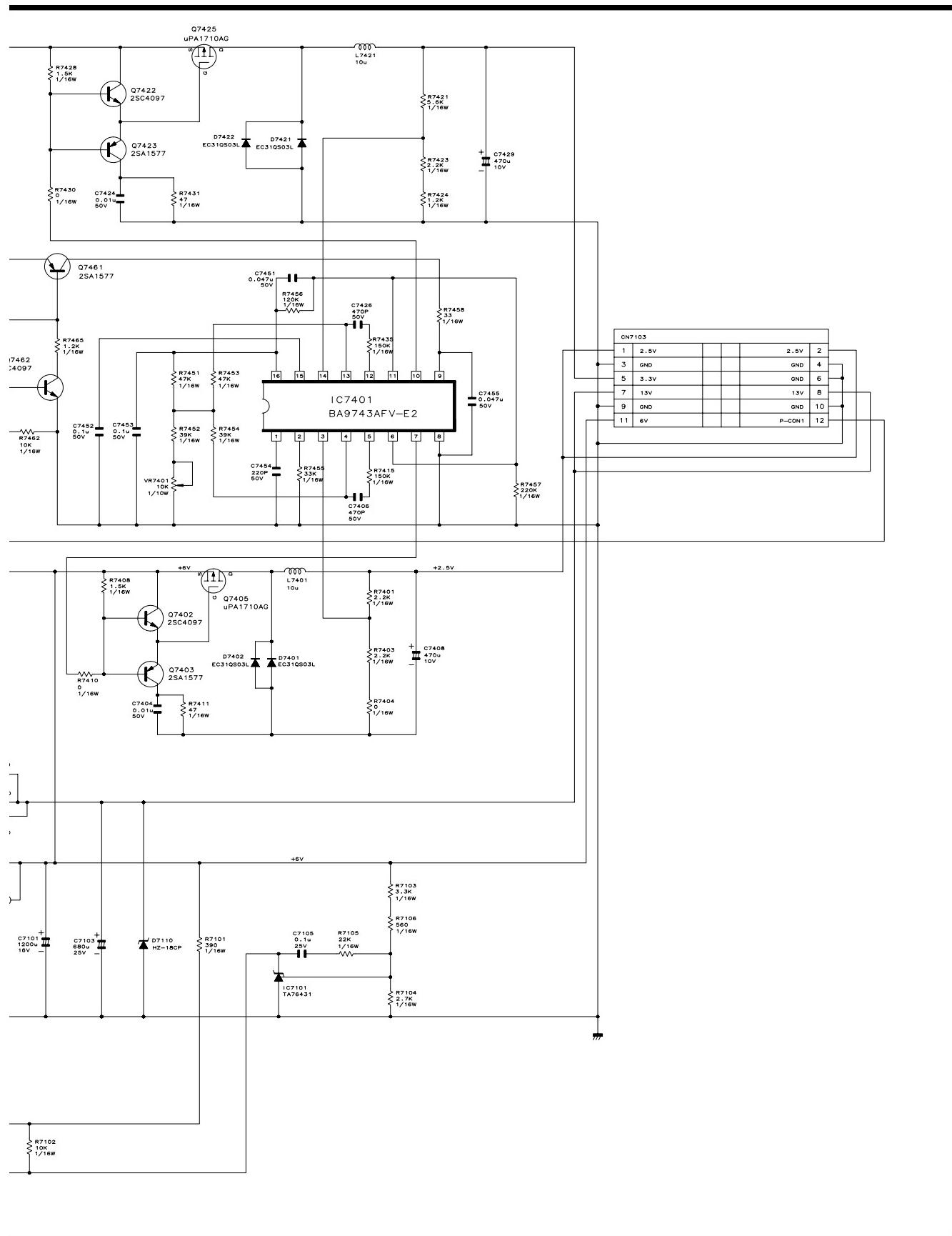


■ POWER UNIT / NETZEINHEIT

DEN (2/2)

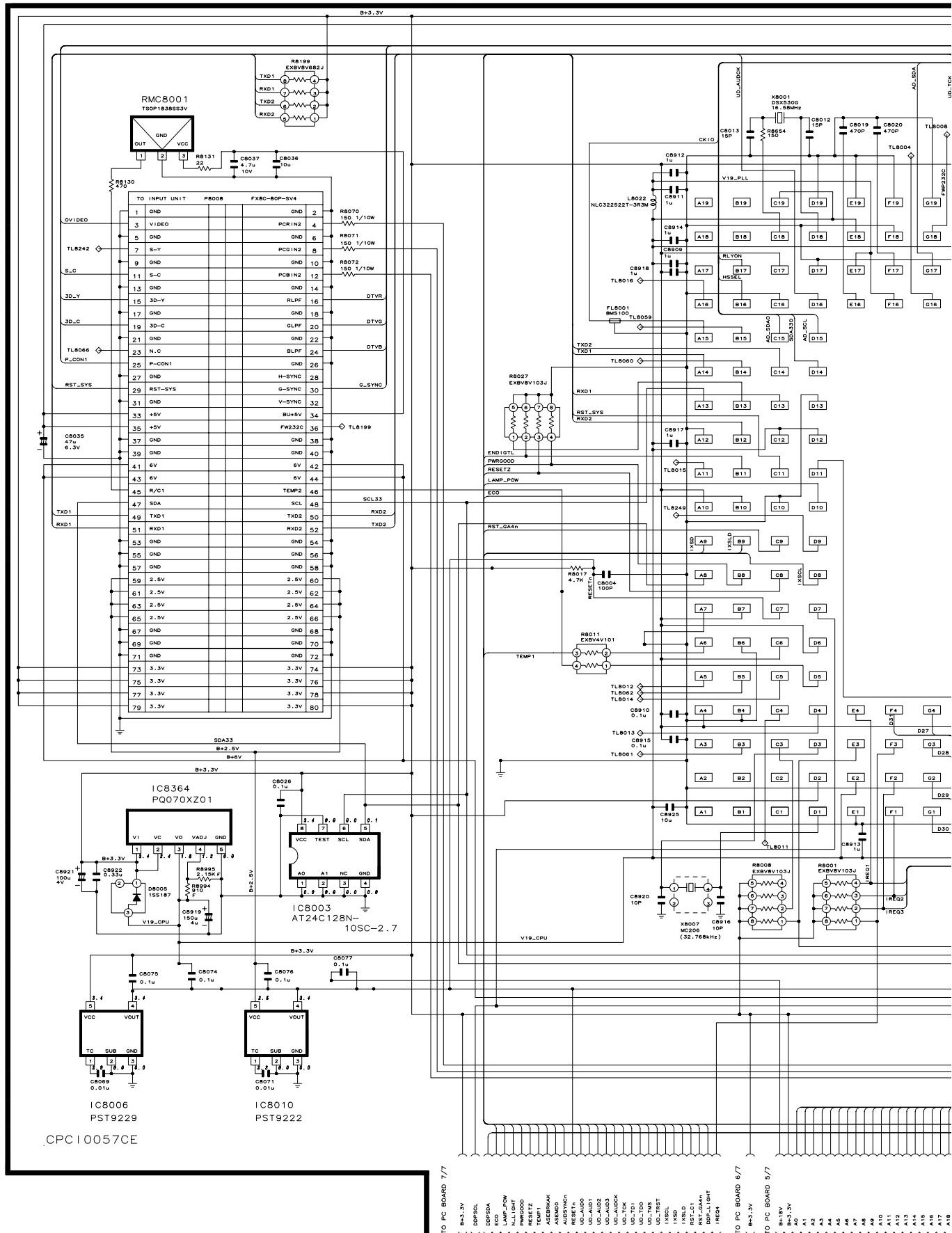
RDENCA010WJZZ

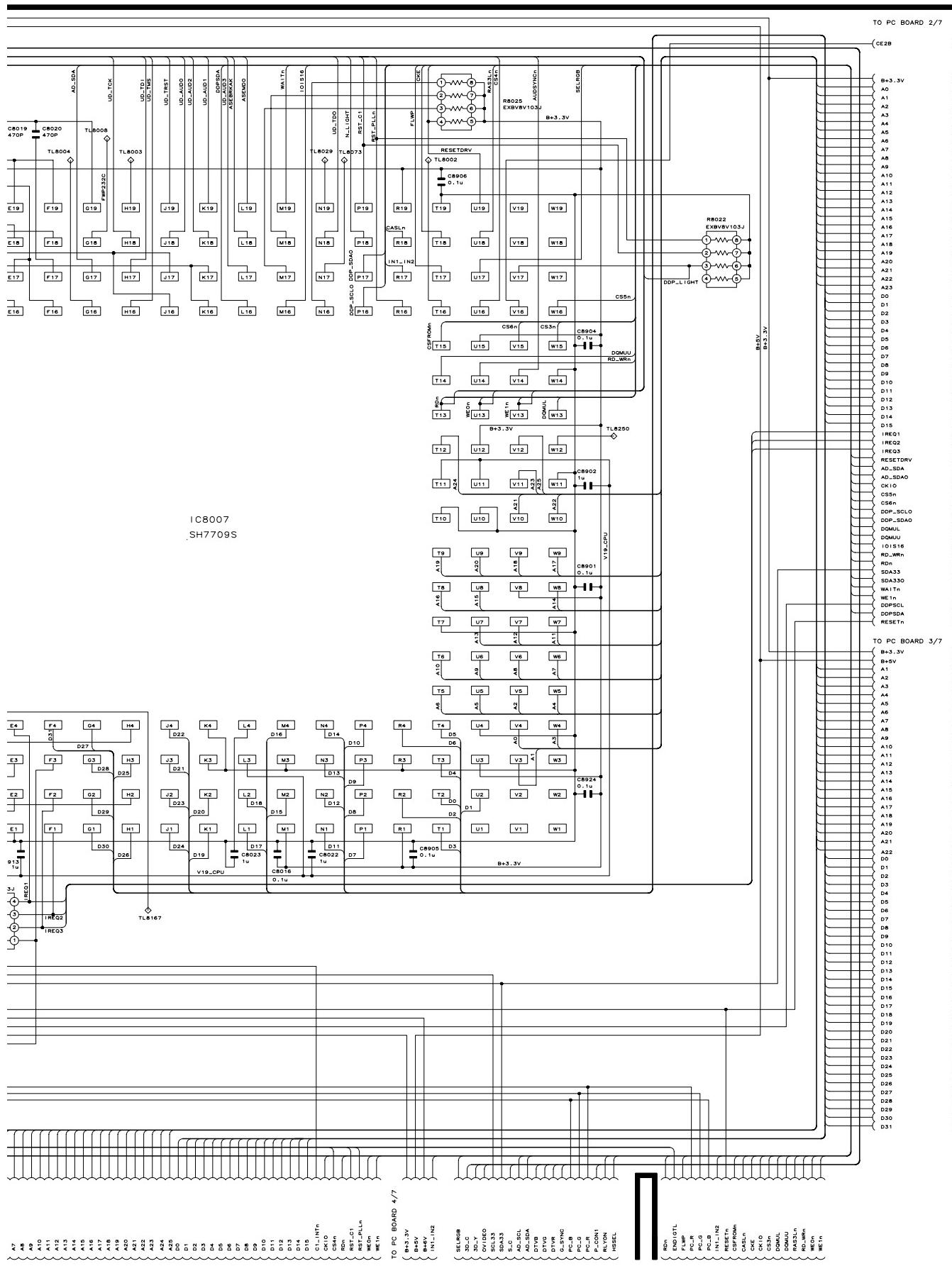




■ PC I/F UNIT-1/7 / PC-I/F-EINHEIT-1/7

PC BOARD (1/7)





■ PC I/F UNIT-2/7 / PC-I/F-EINHEIT-2/7

PC BOARD (2/7)

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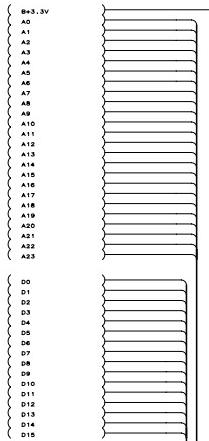
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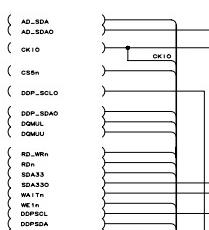
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CPC I-0057CE

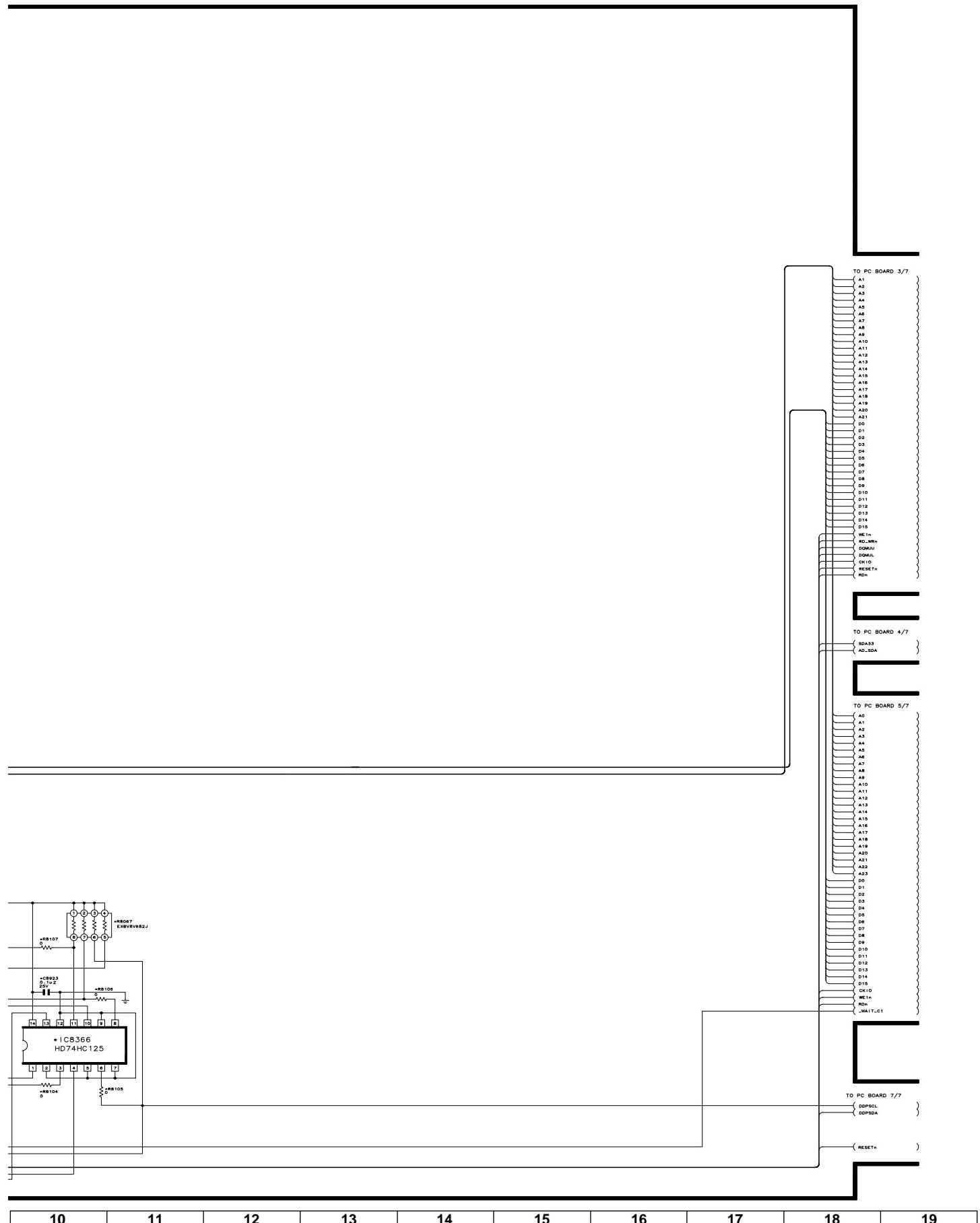
TO PC BOARD 1/7



8+3.3V

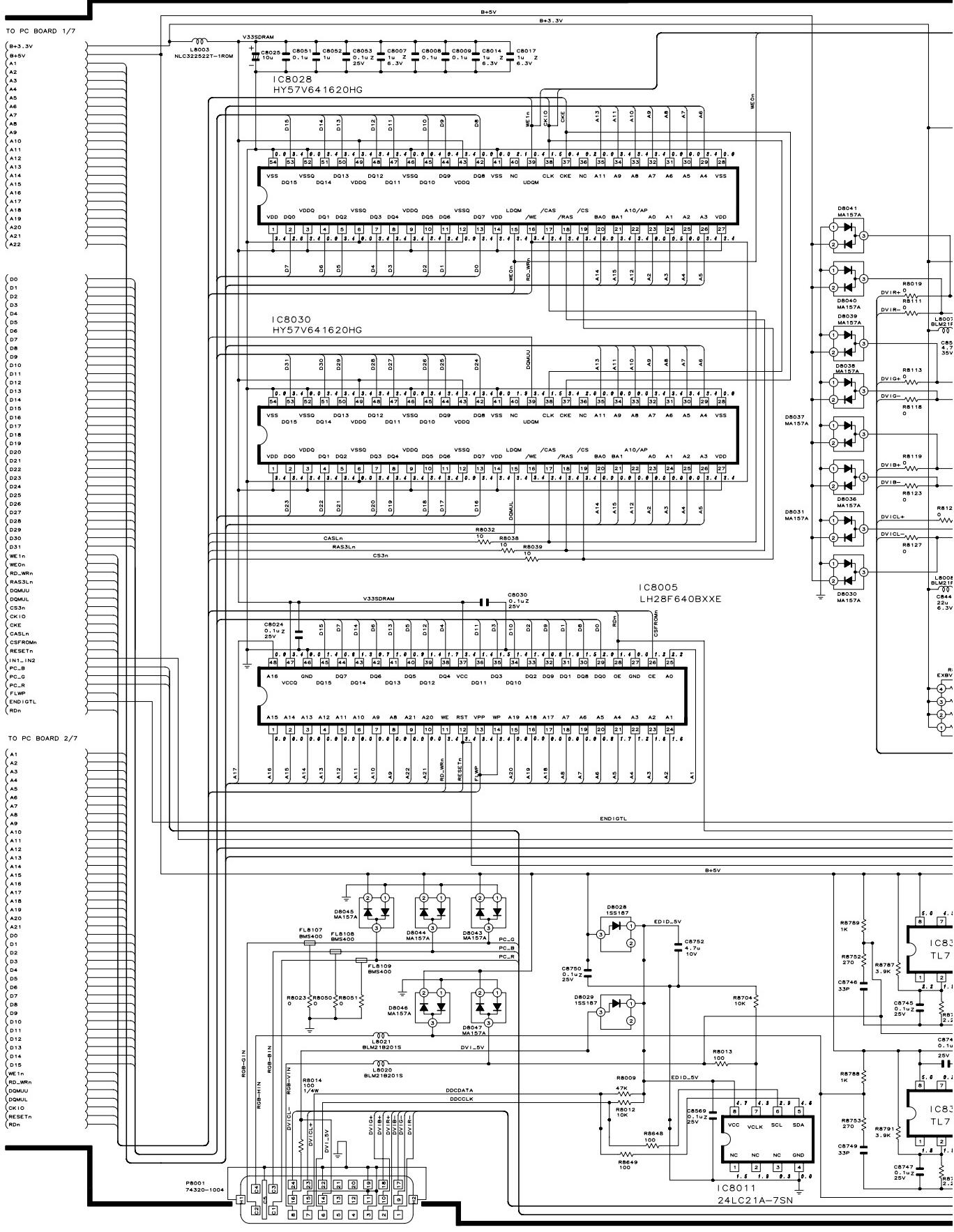


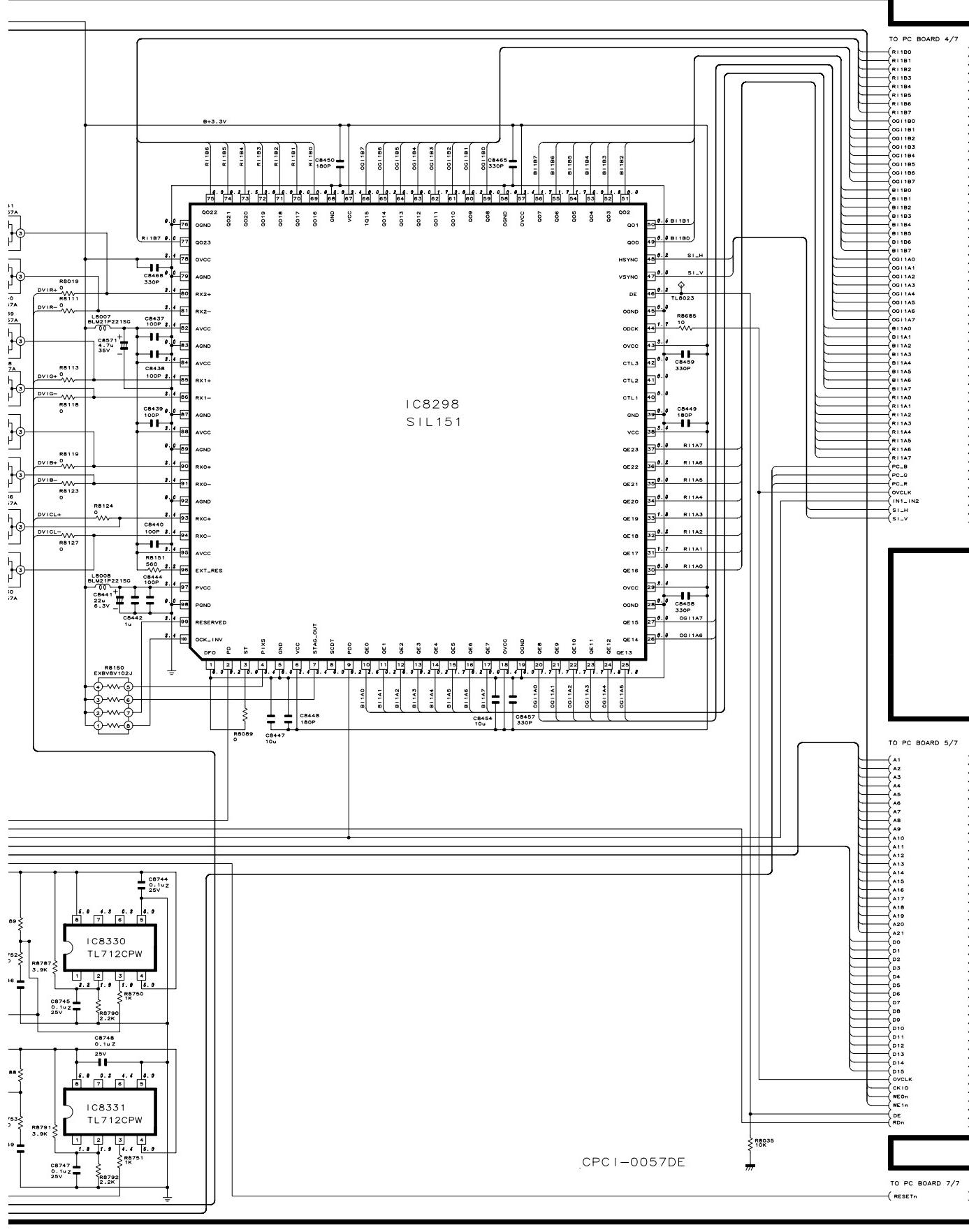
1	2	3	4	5	6	7	8	9	10
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■ PC I/F UNIT-3/7 / PC-I/F-EINHEIT-3/7

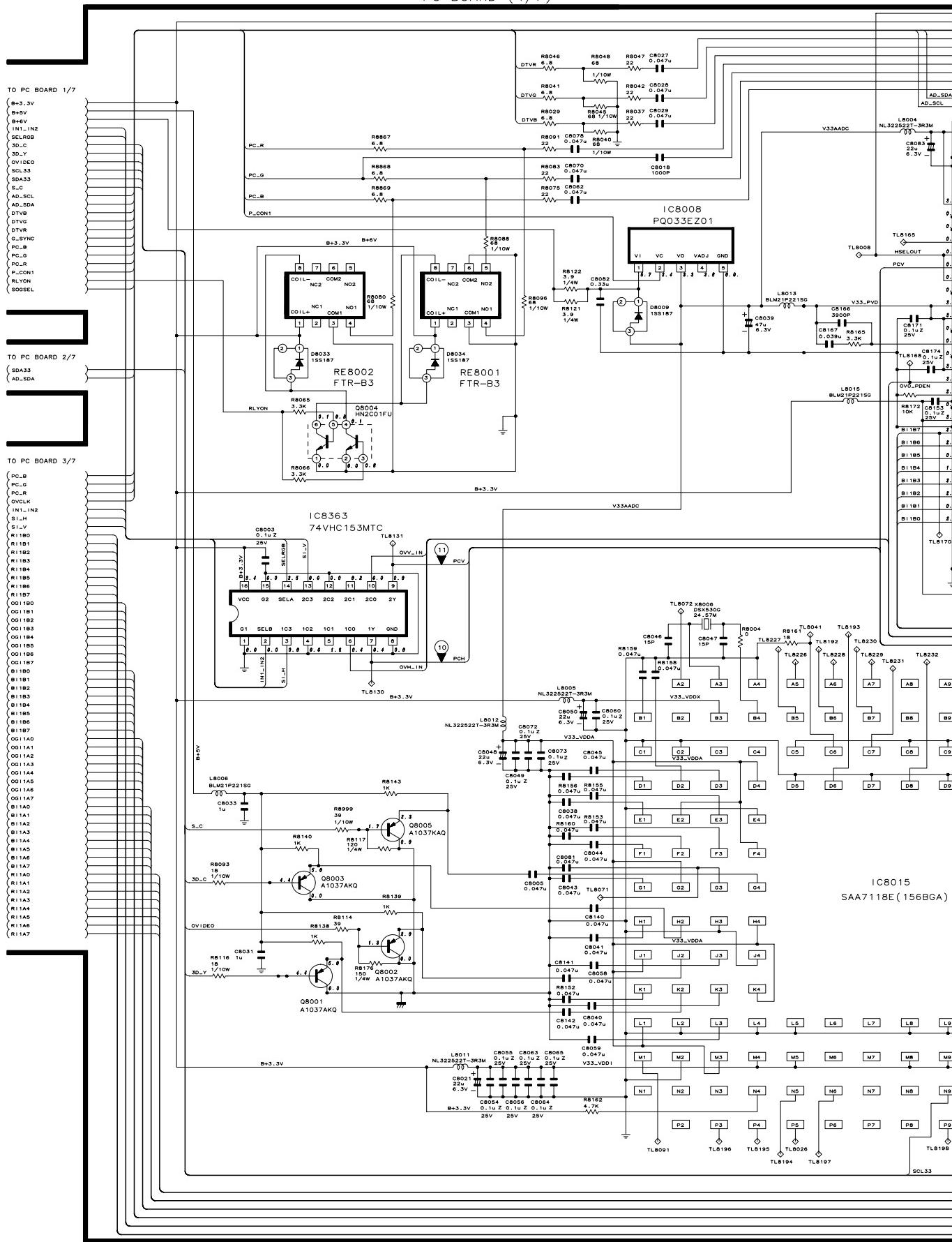
PC BOARD (3/7)

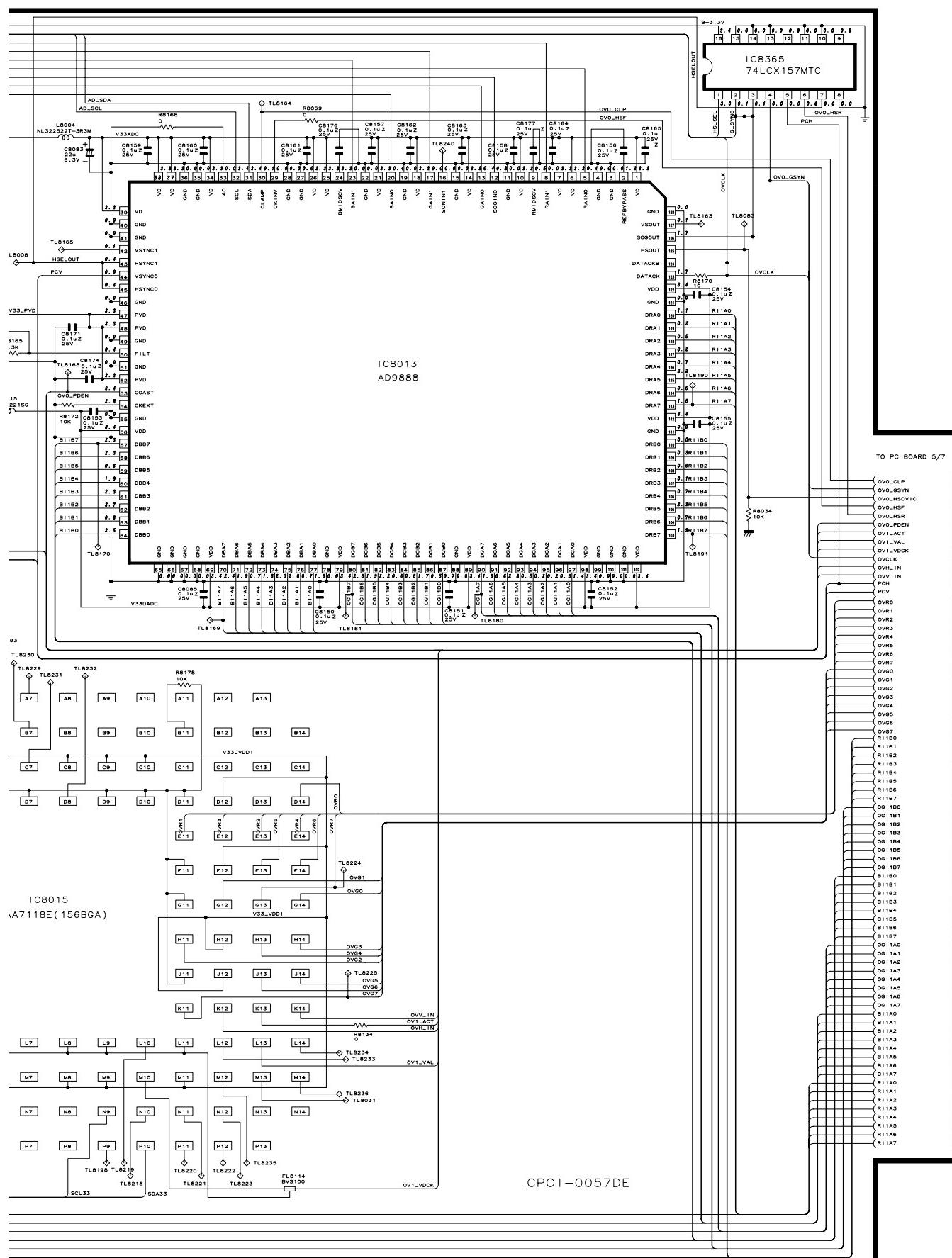




■ PC I/F UNIT-4/7 / PC-I/F-EINHEIT-4/7

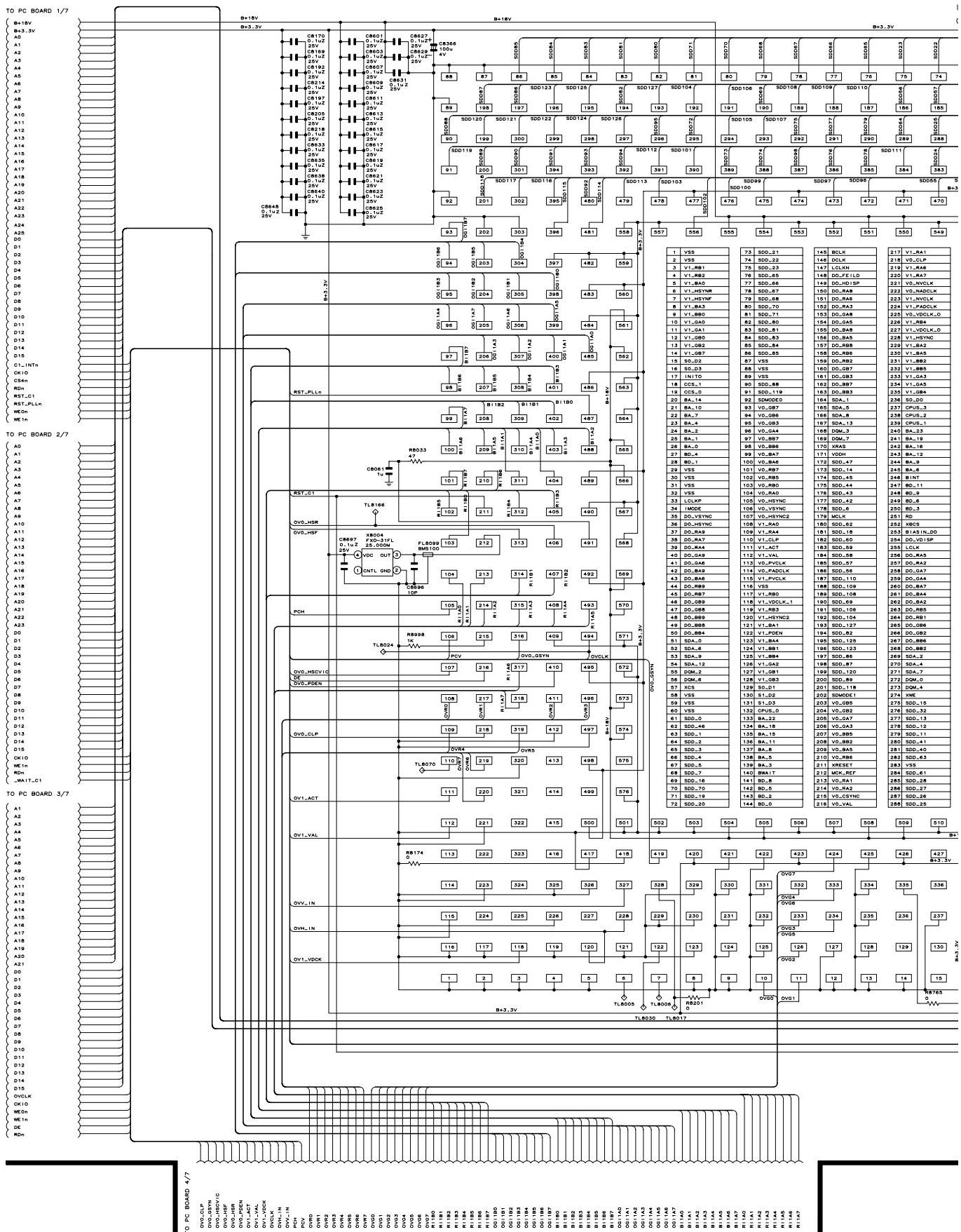
PC BOARD (4/7)





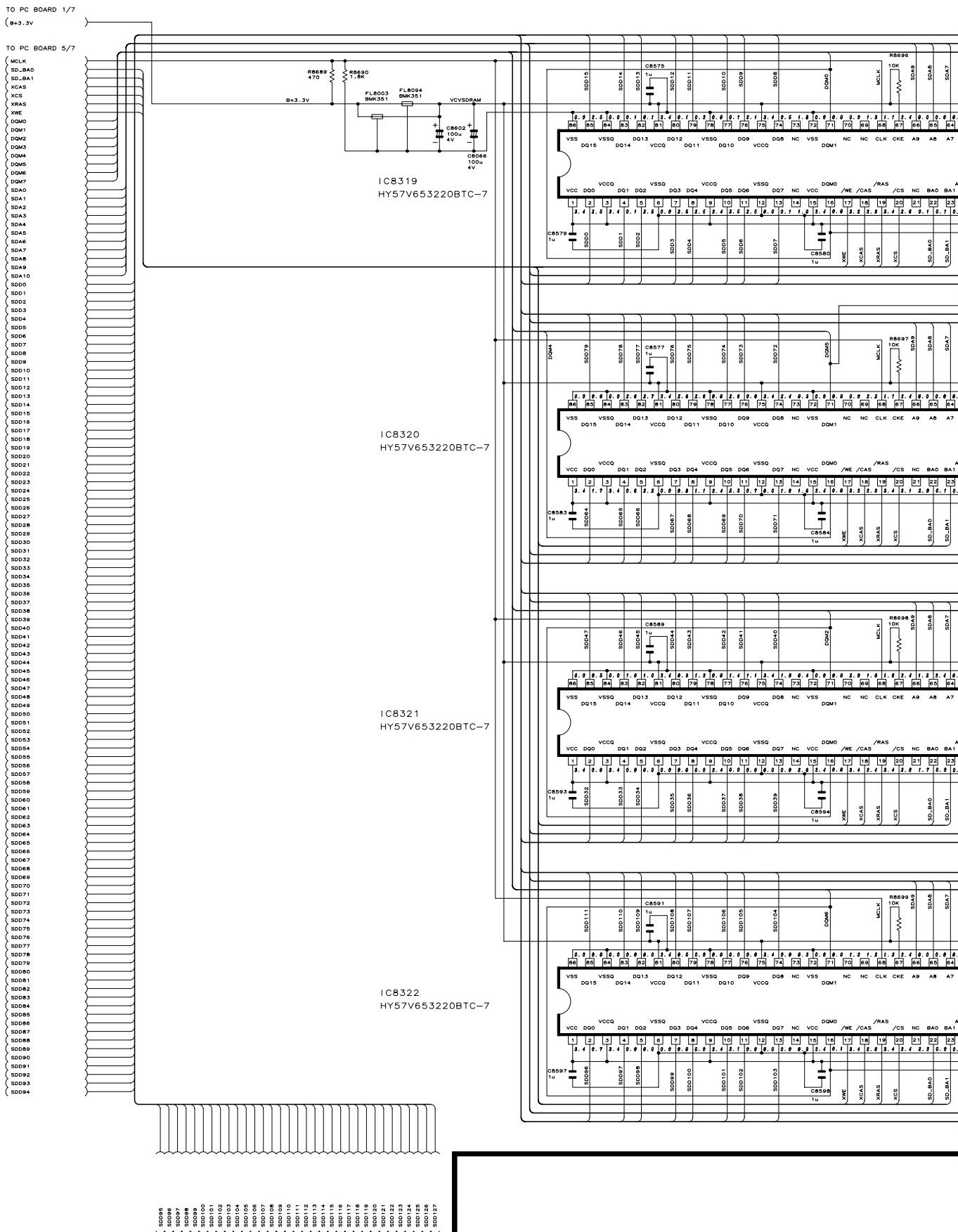
■ PC I/F UNIT-5/7 / PC-I/F-EINHEIT-5/7

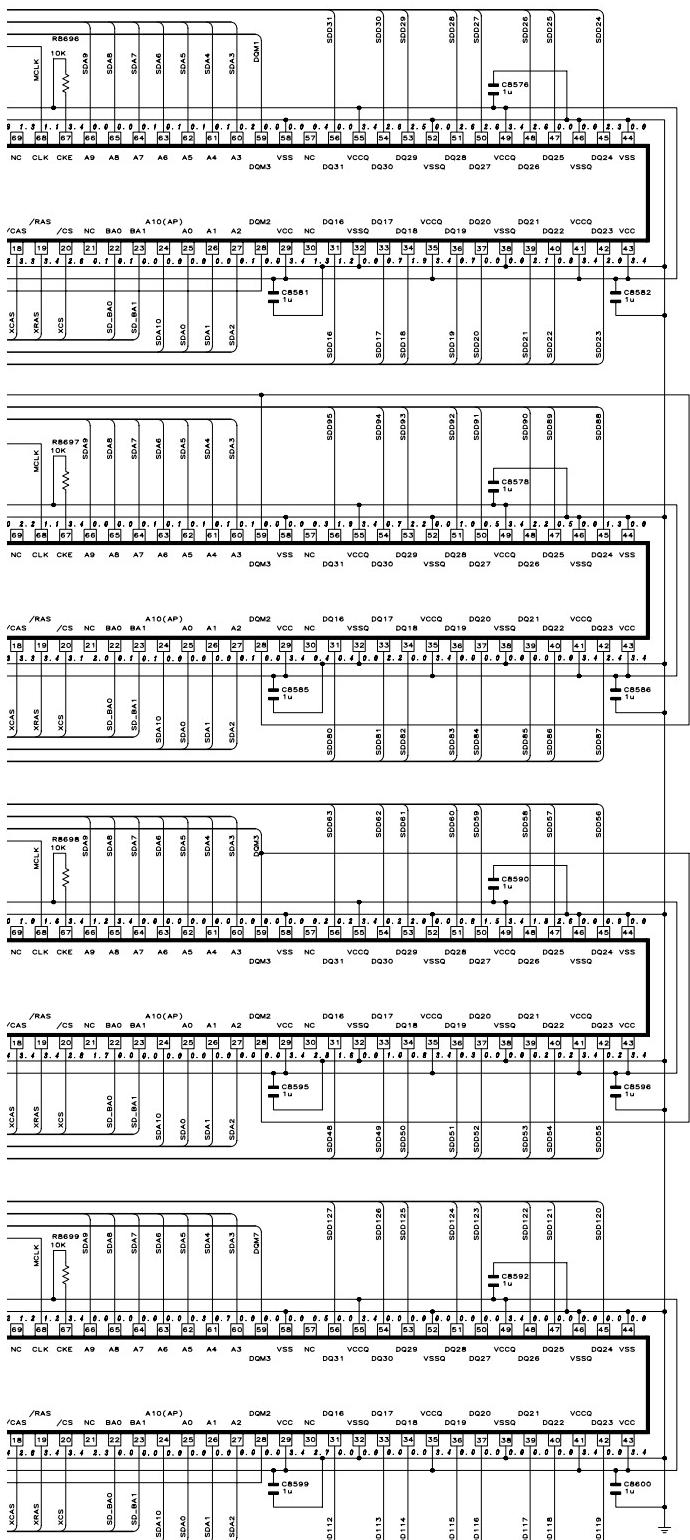
PC BOARD (5/7)



■ PC I/F UNIT-6/7 / PC-I/F-EINHEIT-6/7

PC BOARD (6/7)





■ PC I/F UNIT-7/7 / PC-I/F-EINHEIT-7/7
PC BOARD (7/7)

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TO PC BOARD 1/7

{ B+3.3V

{ DDPSCl

{ DDPSDA

{ ECG

{ LAMP_POW

{ NLIGHT

{ PWROOOD

{ RESETZ

{ TEMP1

{ ASEBRKAK

{ ASEMDO

{ ASERATCH

{ RESETR

{ UD_AUDIO

{ UD_AUDIO1

{ UD_AUDIO2

{ UD_AUDIO3

{ UD_AUDIO5

{ UD_TCK

{ UD_TDI

{ UD_TDO

{ UD_TMS

{ UD_TRTS

{ IXCL

{ IXSD

{ IXSL

{ RST_C1

{ RST_A4An

{ DDP_LIGHT

{ IREG4

TO PC BOARD 2/7

{ DDPSCl

{ DDPSDA

{ FPGA_TCK

{ FPGA_TDI

{ FPGA_TDO

{ FPGA_TMS

{ RESETn

TO PC BOARD 3/7

{ RESETn

TO PC BOARD 5/7

{ D+25V

{ RS10

{ RS11

{ RS12

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{ RS14

{ RS15

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{ RST_C1

{ DOL_VSYNC

{ DOL_VSYNC

{ LCLK

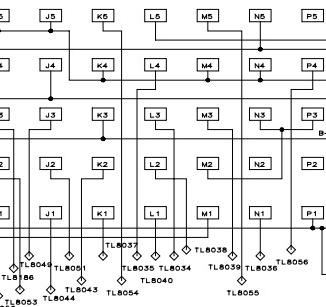
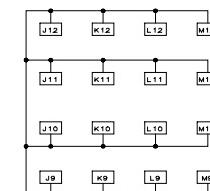
TP8004 TP8005 TP8006 TP8007

PC BOARD (7/7)

B+3.3V

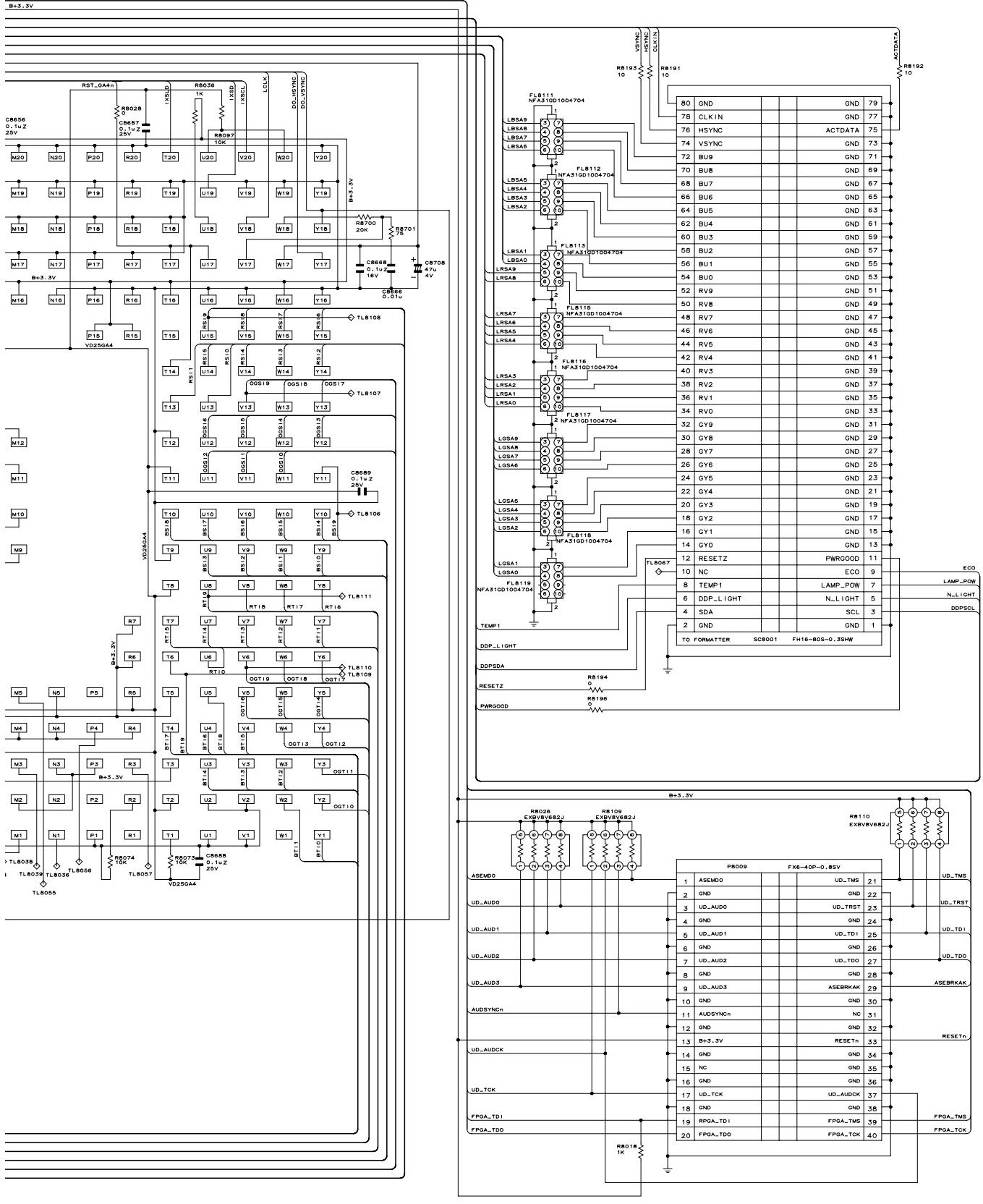
RST_GA4

IC8029
IX3399CEN1

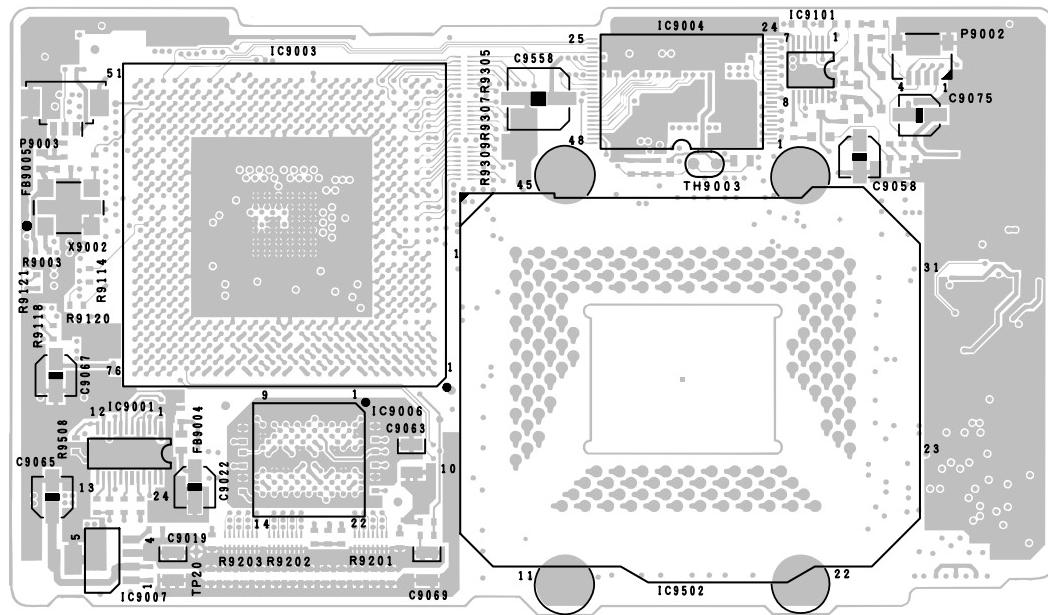


L8014
NLC322522T-3R3M

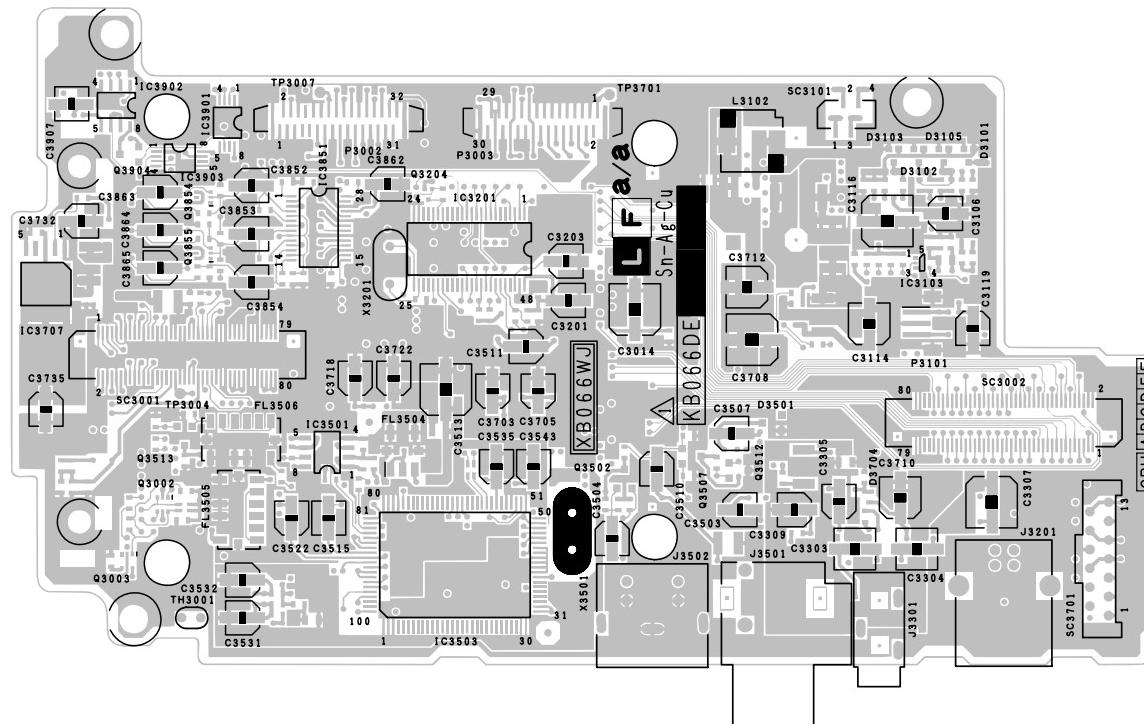
TP8004 TP8005 TP8006 TP8007



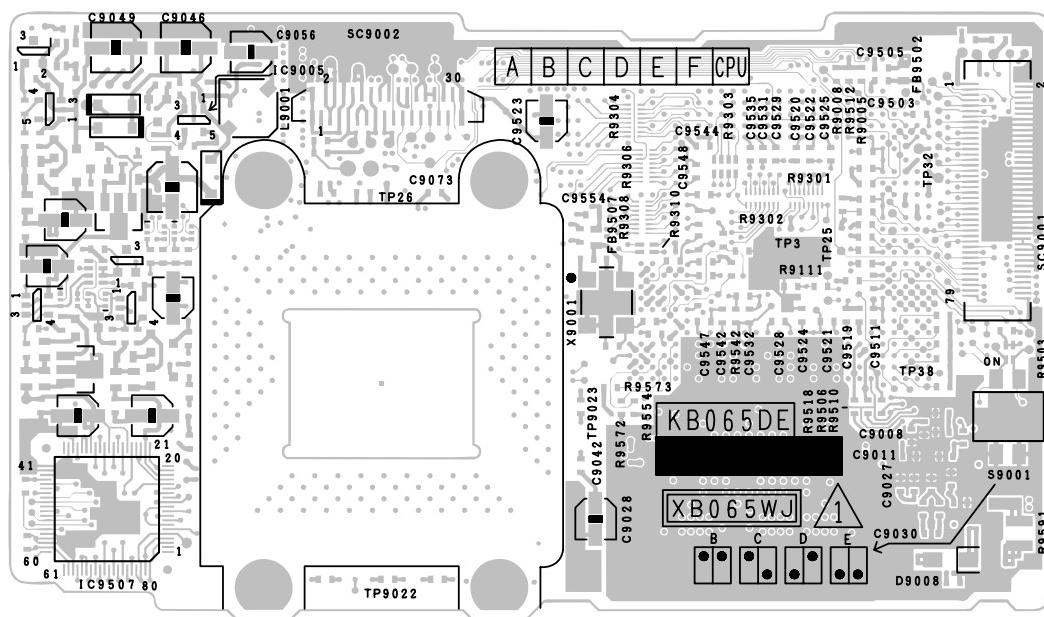
PRINTED WIRING ASSEMBLIES/ LEITERPLATTEINHEITEN



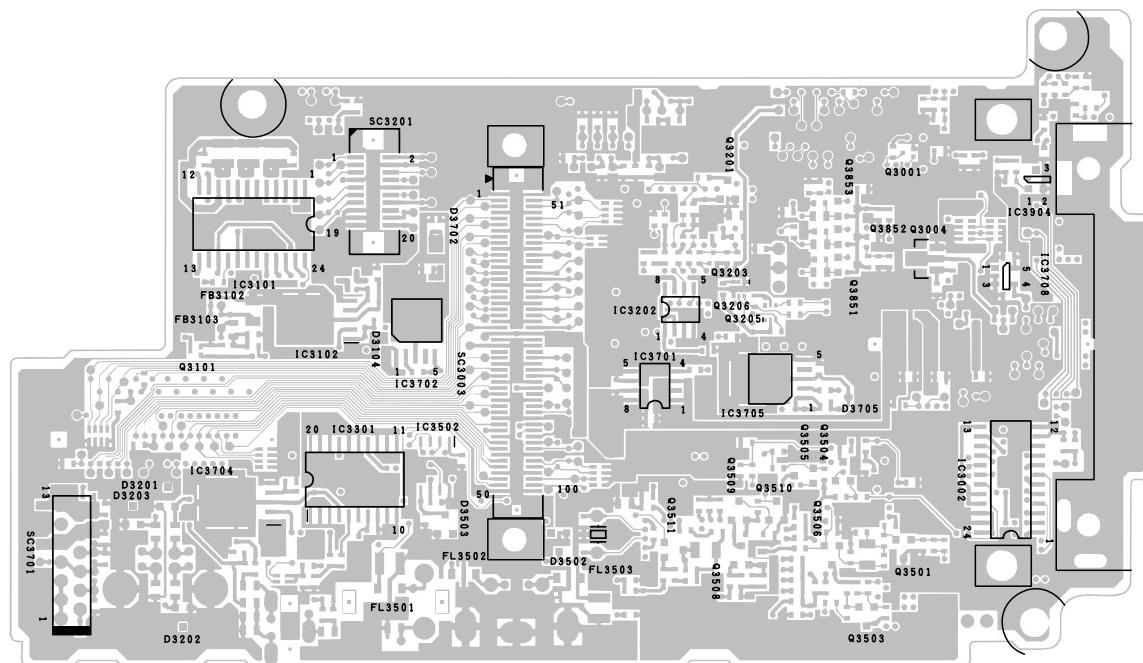
FORMATTER Unit (Side-A) FORMATIERER Einheit (Seite-A)



INPUT Unit (Side-A) EINGANGS Einheit (Seite-A)



FORMATTER Unit (Side-B) FORMATIERER Einheit (Seite-B)



INPUT Unit (Side-B) EINGANGS Einheit (Seite-B)

H

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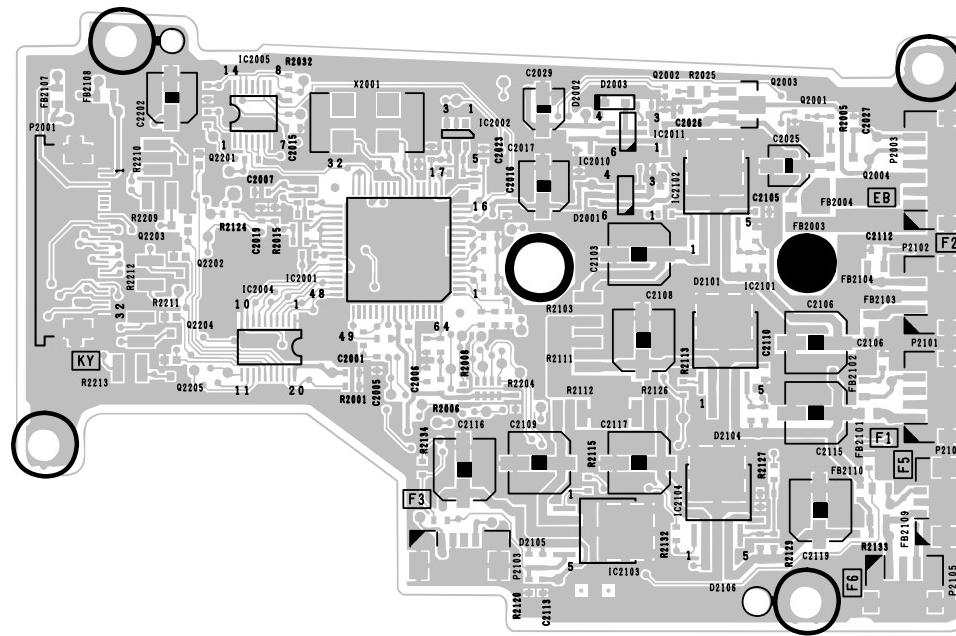
E

D

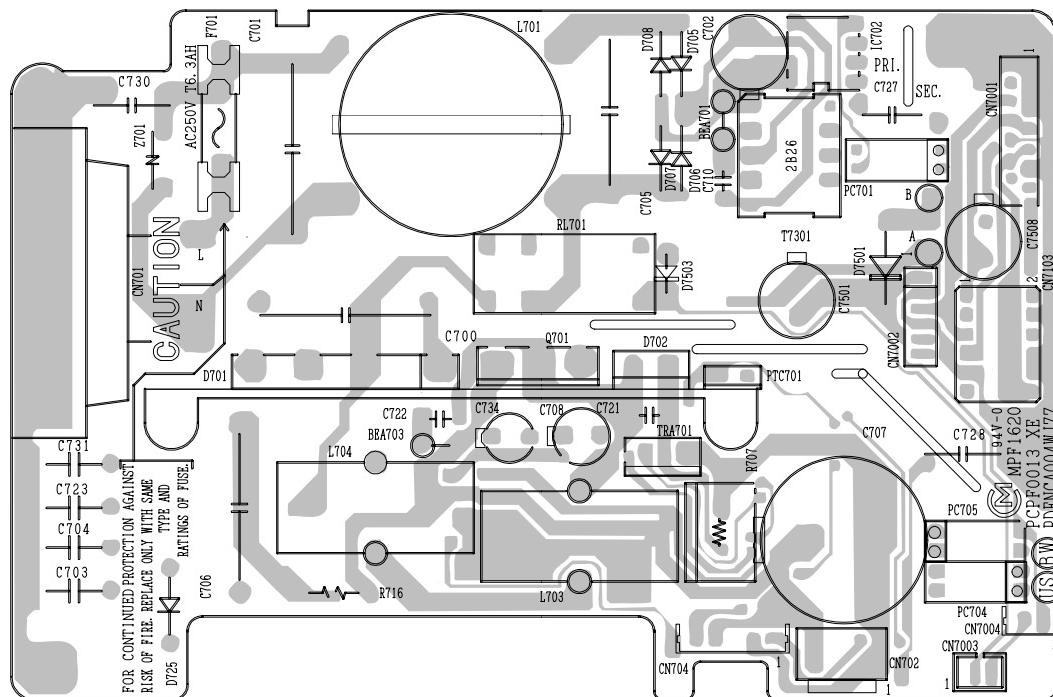
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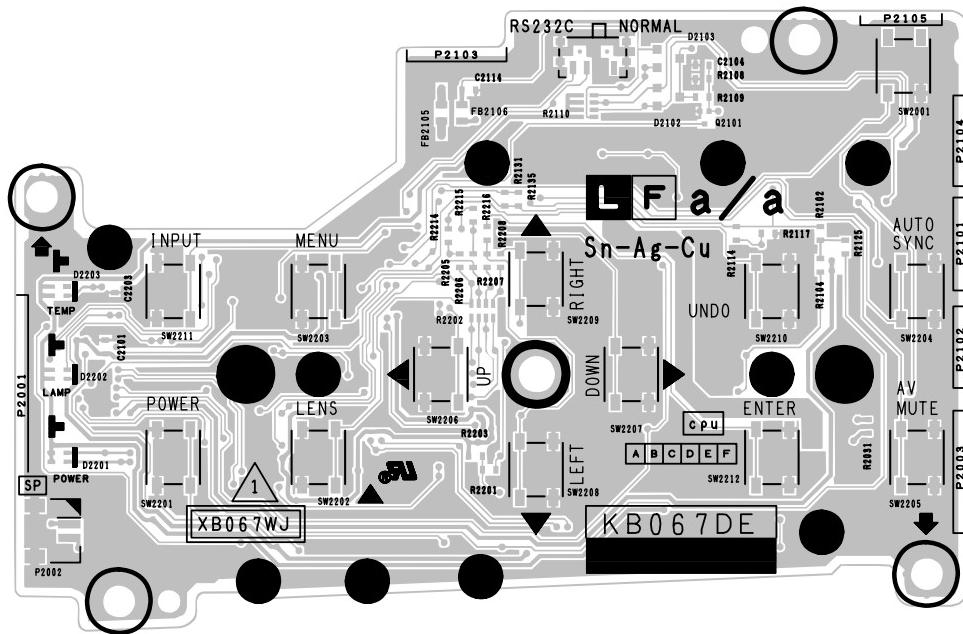
A



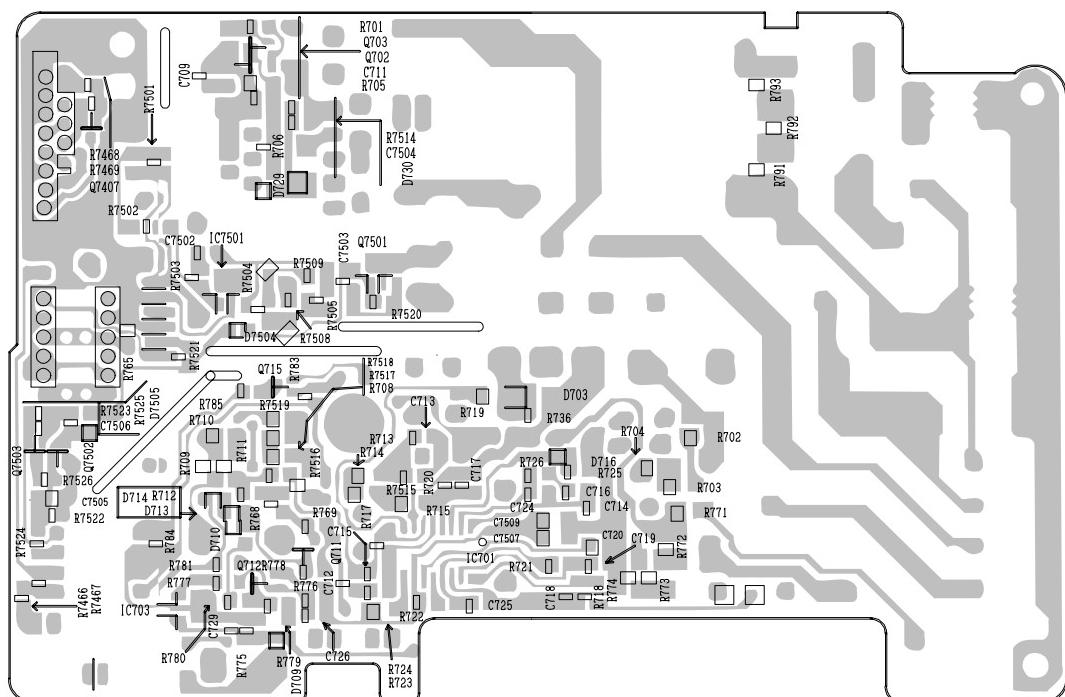
KEY Unit (Side-A)
SCHLÜSSEL Einheit (Seite-A)



PFC Unit (Side-A)
PFC-Einheit (Seite-A)



KEY Unit (Side-B) SCHLÜSSEL Einheit (Seite-B)



PFC Unit (Side-B) PFC-Einheit (Seite-B)

H

G

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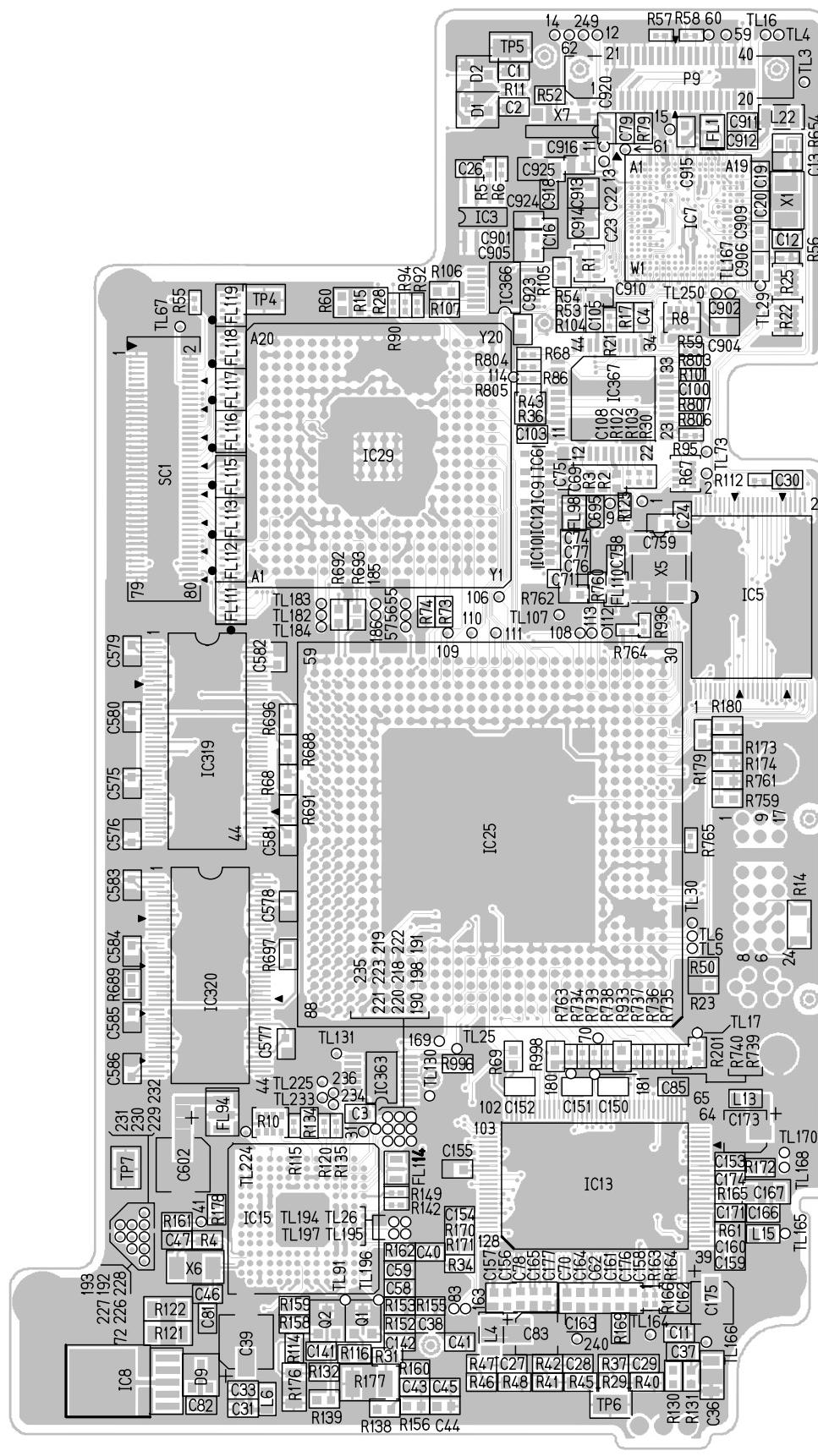
E

D

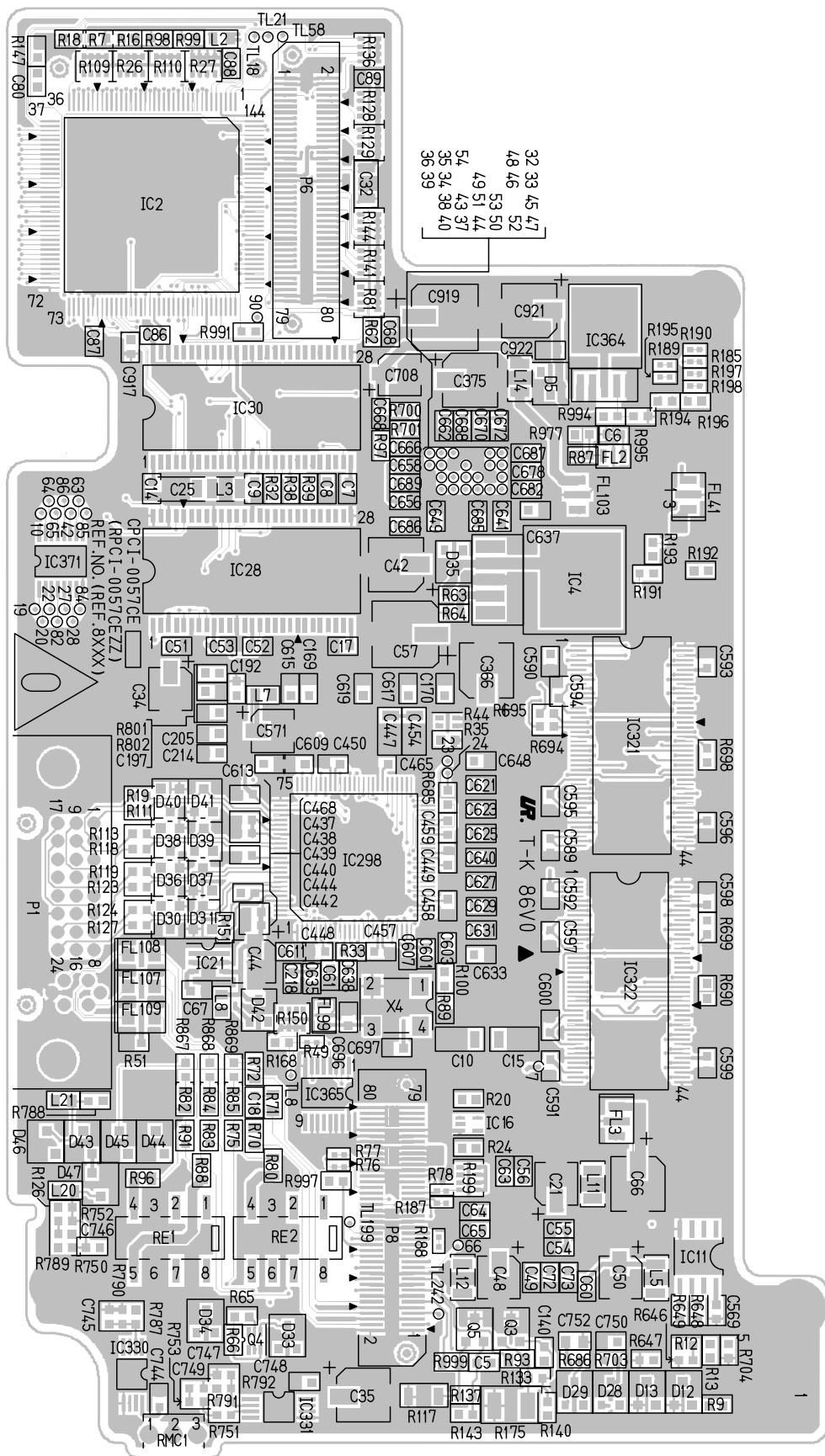
6

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PC I/F Unit (Side-A) PC-I/F Einheit (Seite-A)



PC I/F Unit (Side-B)

PC-I/F Einheit (Seite-B)

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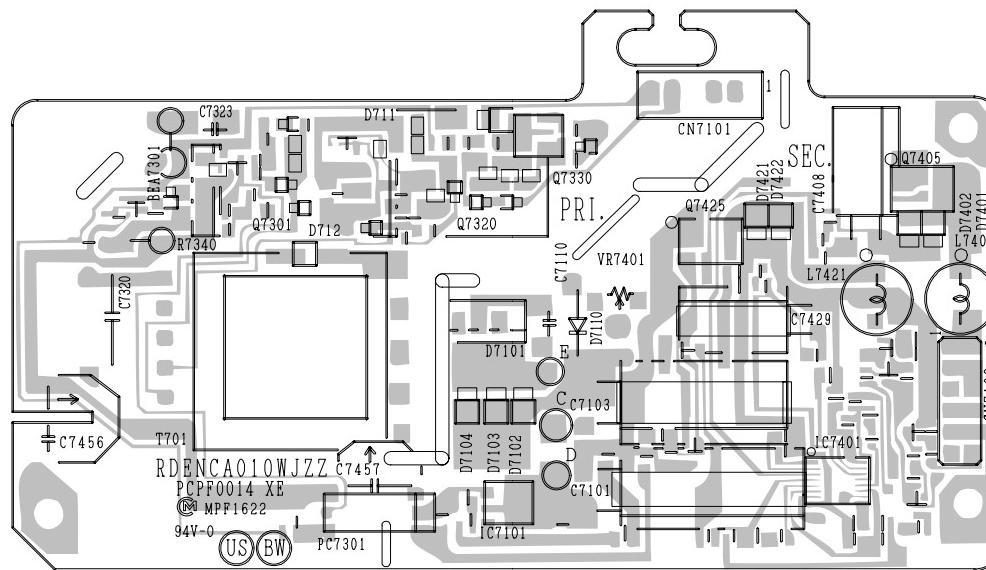
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D

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A



POWER Unit (Component Side) NETZ Einheit (Bestückungsseite)

PARTS LIST

PARTS REPLACEMENT

Parts marked with "Δ" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

- | | |
|-----------------|----------------|
| 1. MODEL NUMBER | 2. REF. NO. |
| 3. PART NO. | 4. DESCRIPTION |
| 5. CODE | 6. QUANTITY |

in USA: Contact your nearest SHARP Parts Distributor.
For location of SHARP Parts Distributor,
Please call Toll-Free; 1-800-BE-SHARP

in CANADA: Contact SHARP Electronics of Canada Limited
Phone (416) 890-2100.

★ MARK: SPARE PARTS-DELIVERY SECTION

Ref. No.	Part No.	★	Description	Code
PRINTED WIRING BOARD ASSEMBLIES (NOT REPLACEMENT ITEM)				

PG-M20X				
DUNTKB065DE01	J	FORMATTER Unit	CP	
DUNTKB066DE01	—	INPUT Unit	—	
DUNTKB067DE01	—	KEY UNIT	—	
RDENCA004WJZZ	—	PFC Unit	—	
RDENCA010WJZZ	—	POWER Unit	—	
CPCI-0057CE01	J	PC I/F Unit	CW	
RDENCA005WJZZ	J	BALLAST Unit (Unit Replacement)	BZ	

PG-M20S				
DUNTKB065DE03	J	FORMATTER Unit	—	
DUNTKB066DE03	—	INPUT Unit	—	
DUNTKB067DE03	—	KEY UNIT	—	
RDENCA004WJN1	—	PFC Unit	—	
RDENCA010WJZZ	—	POWER Unit	—	
CPCI-0057CE31	J	PC I/F Unit	—	
RDENCA005WJZZ	J	BALLAST Unit (Unit Replacement)	BZ	

ERSATZTEILLISTE

AUSTAUSCH VON TEILEN

Ersatzteile, die besondere Sicherheitseigenschaften haben, sind in dieser Anleitung markiert. Elektrische Komponenten mit solchen Eigenschaften sind in den Ersatzteil durch "Δ" gekennzeichnet. Der Gebrauch von Ersatzteilen, die nicht dieselben Sicherheits-eigenschaften haben wie die vom Hersteller empfohlenen und in der Bedienungsanleitung angegebenen, können zur Ursache von Blitz einschlägen, Bränden und anderen Gefahren werden.

"WIE MAN ERSATZTEILE BESTELLT"

Damit Ihre Bestellung prompt und korrekt ausgeführt wird, geben Sie bitte folgende Informationen.

- | | |
|-------------------|-----------------|
| 1. MODELL NR. | 2. REF. NR. |
| 3. ERSATZTEIL NR. | 4. BESCHREIBUNG |
| 5. KODE | 6. QUANTITÄT |

★ MARKIERUNG : ERSATZTEILE-LIEFERUNG

Ref. No.	Part No.	★	Description	Code
DUNTKB065DE01 (PG-M20X) DUNTKB065DE03 (PG-M20S) FORMATTER UNIT				

INTEGRATED CIRCUITS				
IC9001	VHiTCDCR83D-1Y	J	TCDCR83D	AR
IC9004	RH-iXA090WJZZQ	J	IC (PG-M20X)	AU
IC9004	RH-iXA343WJZZ	J	IC (PG-M20S)	AS
IC9005	VHiLT1613CS-1Y	J	LT1613CS	AM
IC9007	VHiLP3962M1-1Y	J	LP3962M1	AD
IC9101	VHiAHCT08PW-1Y	J	AHCT08PW	AH
IC9504	VHiOPA237NA-1Y	J	OPA237NA	AH
IC9505	VHiLM321MF+-1Y	J	LM321MF	AE
IC9506	VHiOPA237NA-1Y	J	OPA237NA	AH
IC9510	VHi4040CM35-1Y	J	4040CM35	AH
IC9511	VHi4040CM35-1Y	J	4040CM35	AH
<i>Note: When exchanging the following parts, it becomes unit replacement correspondence.</i>				
IC9003	—	—	DDP1000	—
IC9006	—	—	RAMBUS	—

TRANSISTORS				
Q9001	VS2SJ356+++-1Y	J	2SJ356	AE
Q9002	VS2SC4672Q/-1	J	2SC4672Q	AE
Q9003	VS2SC3928AR-1	J	2SC3928AR	AB
Q9101	VS2SC3928AR-1	J	2SC3928AR	AB
Q9102	VS2SC3928AR-1	J	2SC3928AR	AB
Q9501	VSMMBT2907A-1Y	J	MMBT2907A	AB
Q9502	VSMMBT2907A-1Y	J	MMBT2907A	AB
Q9503	VSMMBT2222A-1Y	J	MMBT2222A	AB
Q9504	VSMMBT2907A-1Y	J	MMBT2907A	AB
Q9505	VSMMBT2222A-1Y	J	MMBT2222A	AB
Q9506	VSMMBT2907A-1Y	J	MMBT2907A	AB
Q9507	VSiMT17++++-1Y	J	IMT17	AC
Q9508	VSUMH4N++++-1Y	J	UMH4N	AC
Q9509	VSUMH4N++++-1Y	J	UMH4N	AC
Q9510	VSFDG6303N+-1Y	J	FDG6303N	AE
Q9511	VSFDG6303N+-1Y	J	FDG6303N	AE

DIODES AND THERMISTER				
D9005	VHDMI1A3///2E	J	Diode	AC
D9006	VHDMI1A3///2E	J	Diode	AC
D9007	VHDMI1A3///2E	J	Diode	AC
D9008	VHDSFPA73///2EY	J	Diode	AD
TH9003	RH-HXA001WJZZ	J	Thermister	AD

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
DUNTKB065DE01 (PG-M20X)									
DUNTKB065DE03 (PG-M20S)									
FORMATTER UNIT (Continued)									
PACKAGED CIRCUITS AND COIL									
X9001	RCRUA001WJZZY	J	Crystal	AN	C9503	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
X9002	RCRUA002WJZZY	J	Crystal	AN	C9505	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
L9001	RCiLP0191GEZZY	J	Peaking Coil	AD	C9510	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
CAPACITORS									
C9001	VCEAPF1CW106M	J	10 16V Electrolytic	AB	C9511	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9002	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C9513	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9003	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C9514	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9004	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C9515	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9006	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C9516	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9007	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C9517	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9008	VCCCCY1HH680J	J	68p 50V Ceramic	AA	C9519	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9009	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C9520	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9010	VCCCCY1HH680J	J	68p 50V Ceramic	AA	C9521	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9011	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C9522	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9013	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C9523	VCEAPF1CW106M	J	10	16V Electrolytic AB
C9014	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C9524	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9015	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C9525	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9016	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C9527	VCKYCY1HF104ZY	J	0.1	50V Ceramic AA
C9019	VCSNDE0GP107MY	J	100 4V Chip	AF	C9528	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9021	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C9529	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9022	VCEAPF1CW106M	J	10 16V Electrolytic	AB	C9530	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9023	VCKYCY1CB104K	J	0.1 16V Ceramic	AB	C9531	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9024	VCCCCY1HH680J	J	68p 50V Ceramic	AA	C9532	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9025	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C9533	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9026	VCCCCY1HH680J	J	68p 50V Ceramic	AA	C9535	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9027	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C9536	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9028	VCEAPF1HW105M	J	1.0 50V Electrolytic	AB	C9537	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9029	VCKYCY1CB104K	J	0.1 16V Ceramic	AB	C9538	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9030	VCCCCY1HH4R0C	J	4p 50V Ceramic	AA	C9539	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9032	VCKYCY1CB104K	J	0.1 16V Ceramic	AB	C9542	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9034	VCKYCY1CB104K	J	0.1 16V Ceramic	AB	C9544	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9035	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C9545	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9036	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C9546	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9037	VCEASH1VN106MY	J	10 35V Electrolytic	AC	C9547	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9038	VCKYCY1CB104K	J	0.1 16V Ceramic	AB	C9548	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9039	VCKYCY1HF104ZY	J	0.1 50V Ceramic	AA	C9549	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9041	VCKYCY1CB104K	J	0.1 16V Ceramic	AB	C9550	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9042	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C9551	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9043	VCKYCY1CB104K	J	0.1 16V Ceramic	AB	C9552	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9044	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C9553	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9045	VCKYCY1CB104K	J	0.1 16V Ceramic	AB	C9554	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9046	VCEASH1VN106MY	J	10 35V Electrolytic	AC	C9555	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9047	VCKYCY1HF104ZY	J	0.1 50V Ceramic	AA	C9558	VCEAPF0GW227M	J	220	4V Electrolytic AB
C9049	VCEASH1VN106MY	J	10 35V Electrolytic	AC	C9562	VCEAPF1HW335M	J	3.3	50V Electrolytic AB
C9050	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C9563	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9051	VCKYCY1HF104ZY	J	0.1 50V Ceramic	AA	C9564	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9053	VCKYCY1CB104K	J	0.1 16V Ceramic	AB	C9565	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9054	VCCCCY1HH7R0D	J	7p 50V Ceramic	AA	C9566	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9055	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C9567	VCKYCY1EF104Z	J	0.1	25V Ceramic AA
C9056	VCEAPV1EW475M	J	4.7 25V Electrolytic	AC					
C9057	VCKYCY1CB104K	J	0.1 16V Ceramic	AB					
C9058	VCEAPF1EW475M	J	4.7 25V Electrolytic	AB					
C9059	VCKYCY1CB104K	J	0.1 16V Ceramic	AB					
C9060	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA					
C9061	VCKYCY1CB104K	J	0.1 16V Ceramic	AB					
C9062	VCKYCY1CB104K	J	0.1 16V Ceramic	AB					
C9063	VCSNDE0GP107MY	J	100 4V Chip	AF					
C9064	VCEAPF1HW105M	J	1.0 50V Electrolytic	AB					
C9065	VCEAPF1CW106M	J	10 16V Electrolytic	AB					
C9066	VCEAPF1HW335M	J	3.3 50V Electrolytic	AB					
C9067	VCEAPF1CW106M	J	10 16V Electrolytic	AB					
C9068	VCEAPF1HW335M	J	3.3 50V Electrolytic	AB					
C9069	VCSNDE0GP107MY	J	100 4V Chip	AF					
C9070	VCKYCY1HF104ZY	J	0.1 50V Ceramic	AA					
C9071	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA					
C9072	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA					
C9073	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA					
C9075	VCEAPF1HW105M	J	1.0 50V Electrolytic	AB					
C9101	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA					
C9102	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA					

RESISTORS

R9001	VRS-CY1JF000J	J	0	1/16W Metal Oxide	AA
R9003	VRS-CY1JF103J	J	10k	1/16W Metal Oxide	AA
R9005	VRS-CY1JF103J	J	10k	1/16W Metal Oxide	AA
R9006	VRS-CY1JF111F	J	110	1/16W Metal Oxide	AA
R9007	VRS-CY1JF111F	J	110	1/16W Metal Oxide	AA
R9008	VRS-CY1JF103J	J	10k	1/16W Metal Oxide	AA
R9010	VRS-CY1JF560F	J	56	1/16W Metal Oxide	AA
R9011	VRS-CY1JF560F	J	56	1/16W Metal Oxide	AA
R9014	VRS-CY1JF302F	J	3k	1/16W Metal Oxide	AA
R9017	VRS-CY1JF683F	J	68k	1/16W Metal Oxide	AA
R9018	VRS-TV1JD240J	J	24	1/16W Metal Oxide	AA
R9020	VRS-CY1JF103J	J	10k	1/16W Metal Oxide	AA
R9031	VRS-CY1JF333J	J	33k	1/16W Metal Oxide	AA
R9032	VRS-CY1JF333J	J	33k	1/16W Metal Oxide	AA
R9101	VRS-CY1JF471J	J	470	1/16W Metal Oxide	AA
R9102	VRS-CY1JF182J	J	1.8k	1/16W Metal Oxide	AA
R9103	VRS-CY1JF472J	J	4.7k	1/16W Metal Oxide	AA
R9104	VRS-CY1JF471J	J	470	1/16W Metal Oxide	AA
R9105	VRS-CY1JF473J	J	47k	1/16W Metal Oxide	AA
R9106	VRS-CY1JF103J	J	10k	1/16W Metal Oxide	AA
R9107	VRS-CY1JF102J	J	1k	1/16W Metal Oxide	AA
R9108	VRS-CY1JF102J	J	1k	1/16W Metal Oxide	AA
R9109	VRS-CY1JF473J	J	47k	1/16W Metal Oxide	AA
R9110	VRS-CY1JF101J	J	100	1/16W Metal Oxide	AA
R9111	VRS-CY1JF101J	J	100	1/16W Metal Oxide	AA
R9112	VRS-CY1JF101J	J	100	1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code					
DUNTKB065DE01 (PG-M20X)														
DUNTKB065DE03 (PG-M20S)														
FORMATTER UNIT (Continued)														
R9113	VRS-CY1JF101J	J 100	1/16W Metal Oxide	AA	R9562	VRS-CY1JF330FY	J 33	1/16W Metal Oxide	AA					
R9114	VRS-CY1JF101J	J 100	1/16W Metal Oxide	AA	R9563	VRS-CY1JF561F	J 560	1/16W Metal Oxide	AA					
R9115	VRS-CY1JF101J	J 100	1/16W Metal Oxide	AA	R9564	VRS-CY1JF562J	J 5.6k	1/16W Metal Oxide	AA					
R9116	VRS-CY1JF000J	J 0	1/16W Metal Oxide	AA	R9565	VRS-CY1JF103J	J 10k	1/16W Metal Oxide	AA					
R9118	VRS-CY1JF101J	J 100	1/16W Metal Oxide	AA	R9566	VRS-CY1JF821F	J 820	1/16W Metal Oxide	AA					
R9119	VRS-CY1JF101J	J 100	1/16W Metal Oxide	AA	R9567	VRS-CY1JF121F	J 120	1/16W Metal Oxide	AA					
R9120	VRS-CY1JF101J	J 100	1/16W Metal Oxide	AA	R9569	VRS-CY1JF102J	J 1k	1/16W Metal Oxide	AA					
R9121	VRS-CY1JF101J	J 100	1/16W Metal Oxide	AA	R9574	VRS-CY1JF222J	J 2.2k	1/16W Metal Oxide	AA					
R9131	VRS-CY1JF184J	J 180k	1/16W Metal Oxide	AA	R9575	VRS-CY1JF222J	J 2.2k	1/16W Metal Oxide	AA					
R9132	VRN-CY1JF472D	J 4.7k	1/16W Metal Film	AA	R9591	VRS-TW2ED000J	J 0	1/4W Metal Oxide	AB					
R9135	VRS-CY1JF103J	J 10k	1/16W Metal Oxide	AA	R9592	VRS-CY1JF103J	J 10k	1/16W Metal Oxide	AA					
R9201	VRK-CD1JJ390FY	J 39	1/16W Metal Compo	AC	SWITCH									
R9202	VRK-CD1JJ390FY	J 39	1/16W Metal Compo	AC	S9001	QSW-SA004WJZZY	J	Slide Switch	AG					
R9203	VRK-CD1JJ390FY	J 39	1/16W Metal Compo	AC	MISCELLANEOUS PARTS									
R9204	VRS-CY1JF390FY	J 39	1/16W Metal Oxide	AA	FB9001	RBLN-0061TAZZ	J	Ferrite Bead	AD					
R9205	VRS-CY1JF390FY	J 39	1/16W Metal Oxide	AA	FB9002	RBLN-0061TAZZ	J	Ferrite Bead	AD					
R9206	VRS-CY1JF390FY	J 39	1/16W Metal Oxide	AA	FB9003	RBLN-0061TAZZ	J	Ferrite Bead	AD					
R9207	VRS-CY1JF390FY	J 39	1/16W Metal Oxide	AA	FB9004	RBLN-0210TAZZ	J	Ferrite Bead	AB					
R9301	VRK-CC1JJ220JY	J 22	1/16W Metal Compo	AC	FB9005	RBLN-0210TAZZ	J	Ferrite Bead	AB					
R9302	VRK-CC1JJ220JY	J 22	1/16W Metal Compo	AC	FB9006	RBLN-0061TAZZ	J	Ferrite Bead	AD					
R9303	VRS-CB1JF220J	J 22	1/16W Metal Oxide	AC	FB9502	RBLN-0210TAZZ	J	Ferrite Bead	AB					
R9304	VRK-CC1JJ220JY	J 22	1/16W Metal Compo	AC	FB9507	RBLN-0210TAZZ	J	Ferrite Bead	AB					
R9305	VRK-CC1JJ220JY	J 22	1/16W Metal Compo	AC	P9002	QPLGN0474TAZZ	J	Plug, 4-pin	AD					
R9306	VRK-CC1JJ220JY	J 22	1/16W Metal Compo	AC	P9003	QPLGN0363TAZZ	J	Plug, 3-pin	AC					
R9307	VRK-CC1JJ220JY	J 22	1/16W Metal Compo	AC	SC9001	QSOCN8003WJZZY	J	Socket, 80-pin	AM					
R9308	VRK-CC1JJ220JY	J 22	1/16W Metal Compo	AC	SC9002	QSOCN3078TAZZ	J	Socket, 30-pin	AE					
R9309	VRK-CC1JJ220JY	J 22	1/16W Metal Compo	AC										
R9310	VRS-CA1JF220J	J 22	1/16W Metal Oxide	AA										
R9401	VRS-CA1JF273J	J 27k	1/16W Metal Oxide	AA										
R9402	VRS-CB1JF273J	J 27k	1/16W Metal Oxide	AC										
R9502	VRS-CY1JF222J	J 2.2k	1/16W Metal Oxide	AA										
R9503	VRS-CA1JF103J	J 10k	1/16W Metal Oxide	AA										
R9506	VRS-CY1JF240FY	J 24	1/16W Metal Oxide	AA										
R9507	VRS-CY1JF103J	J 10k	1/16W Metal Oxide	AA										
R9508	VRS-CY1JF103J	J 10k	1/16W Metal Oxide	AA										
R9509	VRS-CY1JF102J	J 1k	1/16W Metal Oxide	AA										
R9510	VRS-CY1JF240FY	J 24	1/16W Metal Oxide	AA										
R9511	VRS-CY1JF102J	J 1k	1/16W Metal Oxide	AA										
R9512	VRS-CY1JF222J	J 2.2k	1/16W Metal Oxide	AA										
R9515	VRS-TV1JD270J	J 27	1/16W Metal Oxide	AA										
R9517	VRS-CY1JF103J	J 10k	1/16W Metal Oxide	AA										
R9518	VRS-CY1JF240FY	J 24	1/16W Metal Oxide	AA										
R9519	VRS-CY1JF102J	J 1k	1/16W Metal Oxide	AA										
R9522	VRS-CY1JF103J	J 10k	1/16W Metal Oxide	AA										
R9524	VRS-CY1JF240JY	J 24	1/16W Metal Oxide	AA										
R9527	VRS-CY1JF104F	J 100k	1/16W Metal Oxide	AA										
R9528	VRS-CY1JF273J	J 27k	1/16W Metal Oxide	AA										
R9529	VRS-TV1JD240J	J 24	1/16W Metal Oxide	AA										
R9530	VRS-TV1JD330J	J 33	1/16W Metal Oxide	AA										
R9532	VRS-CY1JF103J	J 10k	1/16W Metal Oxide	AA										
R9535	VRS-CY1JF203F	J 20k	1/16W Metal Oxide	AA										
R9538	VRS-TV1JD1R0J	J 1	1/16W Metal Oxide	AA										
R9539	VRN-CY1JF472D	J 4.7k	1/16W Metal Film	AA										
R9541	VRS-CY1JF202F	J 2k	1/16W Metal Oxide	AA										
R9542	VRS-CY1JF111F	J 110	1/16W Metal Oxide	AA										
R9543	VRS-CY1JF240JY	J 24	1/16W Metal Oxide	AA										
R9546	VRS-TV1JD100J	J 10	1/16W Metal Oxide	AA										
R9547	VRS-CY1JF432F	J 4.3k	1/16W Metal Oxide	AA										
R9548	VRN-CY1JF472D	J 4.7k	1/16W Metal Film	AA										
R9549	VRS-TV1JD1R0J	J 1	1/16W Metal Oxide	AA										
R9550	VRN-CY1JF203D	J 20k	1/16W Metal Film	AB										
R9551	VRS-CY1JF222F	J 2.2k	1/16W Metal Oxide	AA										
R9552	VRS-TV1JD240J	J 24	1/16W Metal Oxide	AA										
R9553	VRS-TV1JD240J	J 24	1/16W Metal Oxide	AA										
R9554	VRS-CY1JF102J	J 1k	1/16W Metal Oxide	AA										
R9555	VRS-TV1JD1R0J	J 1	1/16W Metal Oxide	AA										
R9556	VRS-CY1JF100J	J 10	1/16W Metal Oxide	AA										
R9557	VRS-CY1JF820F	J 82	1/16W Metal Oxide	AA										
R9558	VRS-CY1JF331F	J 330	1/16W Metal Oxide	AA										
R9559	VRS-CY1JF000J	J 0	1/16W Metal Oxide	AA										
R9560	VRS-CY1JF102J	J 1k	1/16W Metal Oxide	AA										
R9561	VRS-CY1JF562J	J 5.6k	1/16W Metal Oxide	AA										

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code	
DUNTKB066DE01 (PG-M20X)										
DUNTKB066DE03 (PG-M20S)										
INPUT UNIT										
INTEGRATED CIRCUITS										
IC3002	VHiM62392FP-1	J	M62392FP	AM	C3106	VCEASM1HW105MYJ	1	50V	Electrolytic	AC
IC3101	VHiA8902CLB-1Y	J	A8902CLB	BA	C3107	VCKYCY1HB102K	J	1000p 50V	Ceramic	AA
IC3102	VHiPQ20WZ11-1	J	PQ20WZ1U	AG	C3109	VCKYCY1EF104Z	J	0.1 25V	Ceramic	AA
IC3103	VHiSNT1G14C-1Y	J	SNT1G14C	AD	C3110	VCKYCY1HF224ZY	J	0.22 50V	Ceramic	AA
IC3201	RH-iXA178WJZZY	J	IC	AW	C3111	VCKYCY1EF104Z	J	0.1 25V	Ceramic	AA
IC3301	VHiDA7056AT-1Y	J	TDA7056AT/N2	AM	C3112	VCKYCY1HB562K	J	5600p 50V	Ceramic	AA
IC3502	VHiNJM2244M-1	J	NJM2244M	AG	C3113	VCKYCY1AB154KY	J	0.15 10V	Ceramic	AB
IC3702	VHiPQ12DZ1U-1Y	J	PQ12DZ1U	AG	C3114	VCEASM1EW106MYJ	J	10 25V	Electrolytic	AC
IC3704	VHiPQ20WZ11-1	J	PQ20WZ1U	AG	C3115	VCKYCY1EF104Z	J	0.1 25V	Ceramic	AA
IC3705	VHiPQ05DZ1U-1Y	J	PQ05DZ1U	AG	C3116	VCEASM1CW476MYJ	47	16V	Electrolytic	AC
IC3708	VHiBD4744G+-1Y	J	BD4744G-TR	AD	C3117	VCKYCY1EF104Z	J	0.1 25V	Ceramic	AA
IC3851	VHiSM5300AV-1Y	J	SM5300AV	AR	C3118	VCKYCY1EF104Z	J	0.1 25V	Ceramic	AA
IC3901	VHiTL712CPW-1	J	T1712CPWR	AL	C3119	VCEASM1CW106MYJ	10	16V	Electrolytic	AC
IC3902	VHiLMH6643A-1Y	J	LMH6643A	AP	C3120	VCKYCY1EF104Z	J	0.1 25V	Ceramic	AA
IC3903	VHiTL712CPW-1	J	T1712CPWR	AL	C3121	VCKYCY1EF104Z	J	0.1 25V	Ceramic	AA
TRANSISTORS										
Q3002	VSHN1K03FU+-1Y	J	HN1K03FU	AD	C3201	VCEASM1CW106MYJ	10	16V	Electrolytic	AC
Q3003	VSHN1K03FU+-1Y	J	HN1K03FU	AD	C3202	VCKYCY1EF104Z	J	0.1 25V	Ceramic	AA
Q3004	VS2SB1132Q/-1	J	2SB1132Q	AC	C3204	VCCCCY1HH150J	J	15p 50V	Ceramic	AA
Q3101	VSDTC114EE/-1	J	DTC114EE	AB	C3205	VCCCCY1HH150J	J	15p 50V	Ceramic	AA
Q3201	VSBSS84++++-1Y	J	BSS84	AE	C3301	VCCCCY1HH101J	J	100p 50V	Ceramic	AA
Q3205	VSHN1K03FU+-1Y	J	HN1K03FU	AD	C3302	VCCCCY1HH101J	J	100p 50V	Ceramic	AA
Q3206	VSRN1905//1	J	RN1905	AB	C3303	VCE9PF1CW106M	J	10 16V	Elect.(N.P)	AC
Q3502	VS2SC3928AR-1	J	2SC3928AR	AB	C3304	VCE9PF1CW106M	J	10 16V	Elect.(N.P)	AC
Q3507	VS2SC3928AR-1	J	2SC3928AR	AB	C3305	VCEASM1CW106MYJ	10	16V	Electrolytic	AC
Q3512	VS2SA1530AR-1	J	2SA1530AR	AB	C3306	VCCCCY1HH471J	J	470p 50V	Ceramic	AA
Q3513	VS2SC3928AR-1	J	2SC3928AR	AB	C3307	VCEASM1CW107MYJ	100	16V	Electrolytic	AD
Q3851	VS2SC2735//1	J	2SC2735	AB	C3308	VCKYCY1EF104Z	J	0.1 25V	Ceramic	AA
Q3852	VS2SC2735//1	J	2SC2735	AB	C3309	VCEASM1CW106MYJ	10	16V	Electrolytic	AC
Q3853	VS2SC2735//1	J	2SC2735	AB	C3310	VCKYCY1EF104Z	J	0.1 25V	Ceramic	AA
Q3854	VSHN2C01FU/-1	J	HN2C01FU	AC	C3503	VCEASM1CW106MYJ	10	16V	Electrolytic	AC
Q3855	VSHN2C01FU/-1	J	HN2C01FU	AC	C3504	VCEASM1CW106MYJ	10	16V	Electrolytic	AC
Q3904	VS2SC2412KQ-1	J	2SC2412KQ	AA	C3507	VCEASM1CW106MYJ	10	16V	Electrolytic	AC
DIODES AND THERMISTER										
D3101	VHDBAT54SWT-1Y	J	Diode	AC	C3510	VCEASM1CW106MYJ	10	16V	Electrolytic	AC
D3102	VHDBAT54SWT-1Y	J	Diode	AC	C3511	VCEASM1CW106MYJ	10	16V	Electrolytic	AC
D3103	VHDBAT54SWT-1Y	J	Diode	AC	C3515	VCEASM1CW476MYJ	47	16V	Electrolytic	AC
D3104	VHDDAN222/-1	J	Diode	AA	C3547	VCKYCY1EF104Z	J	0.1 25V	Ceramic	AA
D3105	VHDBAT54SWT-1Y	J	Diode	AC	C3551	VCKYCY1EF104Z	J	0.1 25V	Ceramic	AA
D3201	VHDM3120WA-1	J	Diode	AK	C3701	VCKYCY1EF104Z	J	0.1 25V	Ceramic	AA
D3202	VHDM3120WA-1	J	Diode	AK	C3702	VCKYCY1EF104Z	J	0.1 25V	Ceramic	AA
D3203	VHDM3120WA-1	J	Diode	AK	C3703	VCEASM1CW106MYJ	10	16V	Electrolytic	AC
D3501	RH-EX0227CEZZ	J	Zener Diode	AB	C3706	VCKYCY1EF104Z	J	0.1 25V	Ceramic	AA
D3502	RH-EX0227CEZZ	J	Zener Diode	AB	C3707	VCKYCY1EF104Z	J	0.1 25V	Ceramic	AA
D3503	RH-EX0227CEZZ	J	Zener Diode	AB	C3708	VCEASM1EW476MYJ	47	25V	Electrolytic	AD
D3702	VHDDAN222/-1	J	Diode	AA	C3710	VCEASM1EW106MYJ	10	25V	Electrolytic	AC
D3704	VHDDAN222/-1	J	Diode	AA	C3711	VCKYCY1EF104Z	J	0.1 25V	Ceramic	AA
TH3001	RH-HXA001WJZZ	J	Thermister	AD	C3712	VCEASM1CW226MYJ	22	16V	Electrolytic	AC
PACKAGED CIRCUIT AND FILTERS										
X3201	RFILA0042CEZZ	J	Filter, 454kHz	AD	C3715	VCKYCY1EF104Z	J	0.1 25V	Ceramic	AA
FL3501	RFILN0003TAZZ	J	Filter	AD	C3718	VCEASM1CW106MYJ	10	16V	Electrolytic	AC
FL3502	RFILN0003TAZZ	J	Filter	AD	C3722	VCEASM0JW226MY	J	22 6.3V	Electrolytic	AC
FL3503	RFILN0003TAZZ	J	Filter	AD	C3725	VCKYCY1EF104Z	J	0.1 25V	Ceramic	AA
FL3506	RCILF0306CEZZ	J	Filter	AH	C3726	VCKYCY1EF104Z	J	0.1 25V	Ceramic	AA
CAPACITORS										
C3001	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C3728	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	
C3002	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C3733	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	
C3003	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C3734	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	
C3004	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C3742	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	
C3005	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C3851	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	
C3006	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C3852	VCEASM1HW105MYJ	1	50V	Electrolytic	AC
C3101	VCKYCY1HB102K	J	1000p 50V Ceramic	AA	C3853	VCEASM1HW105MYJ	1	50V	Electrolytic	AC
C3102	VCKYCY1HB332K	J	3300p 50V Ceramic	AA	C3854	VCEASM1HW105MYJ	1	50V	Electrolytic	AC
C3103	VCKYCY1HB332K	J	3300p 50V Ceramic	AA	C3855	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	
C3104	VCKYCY1HB102K	J	1000p 50V Ceramic	AA	C3856	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	
C3105	VCKYCY1HB222K	J	2200p 50V Ceramic	AA	C3857	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	
					C3858	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	
					C3862	VCEASM1CW106MYJ	10	16V	Electrolytic	AC
					C3863	VCEASM1CW106MYJ	10	16V	Electrolytic	AC
					C3864	VCEASM1CW106MYJ	10	16V	Electrolytic	AC
					C3865	VCEASM1CW106MYJ	10	16V	Electrolytic	AC
					C3891	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	
					C3903	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	
					C3904	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	
					C3905	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	
					C3907	VCE9PF1HW474M	J	0.47 50V Elect.(N.P)	AD	
					C3909	VCCCCY1HH101J	J	100p 50V Ceramic	AA	
					C3910	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
DUNTKB066DE01 (PG-M20X)									
DUNTKB066DE03 (PG-M20S)									
INPUT UNIT (Continued)									
C3911	VCKYCY1HB222K	J	2200p 50V Ceramic	AA	R3516	VRS-CY1JF562J	J	5.6k 1/16W Metal Oxide	AA
RESISTORS									
R3003	VRS-CY1JF184J	J	180k 1/16W Metal Oxide	AA	R3522	VRS-CY1JF122J	J	1.2k 1/16W Metal Oxide	AA
R3004	VRS-CY1JF472J	J	4.7k 1/16W Metal Oxide	AA	R3526	VRS-CY1JF332J	J	3.3k 1/16W Metal Oxide	AA
R3006	VRS-CA1JF332JY	J	3.3k 1/16W Metal Oxide	AB	R3528	VRS-CY1JF562J	J	5.6k 1/16W Metal Oxide	AA
R3009	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA	R3531	VRS-CY1JF122J	J	1.2k 1/16W Metal Oxide	AA
R3010	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA	R3537	VRS-TV1JD000J	J	0 1/16W Metal Oxide	AA
R3012	VRS-CY1JF332J	J	3.3k 1/16W Metal Oxide	AA	R3547	VRS-TV1JD000J	J	0 1/16W Metal Oxide	AA
R3014	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA	R3551	VRS-CY1JF105J	J	1M 1/16W Metal Oxide	AA
R3023	VRS-CY1JF221J	J	220 1/16W Metal Oxide	AA	R3552	VRS-CY1JF105J	J	1M 1/16W Metal Oxide	AA
R3024	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA	R3553	VRS-TV1JD000J	J	0 1/16W Metal Oxide	AA
R3026	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA	R3561	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R3027	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA	R3562	VRS-CY1JF391J	J	390 1/16W Metal Oxide	AA
R3101	VRS-TW2ED151J	J	150 1/4W Metal Oxide	AA	R3563	VRS-CY1JF392J	J	3.9k 1/16W Metal Oxide	AA
R3102	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA	R3564	VRS-CY1JF471J	J	470 1/16W Metal Oxide	AA
R3103	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA	R3705	VRS-CY1JF101J	J	100 1/16W Metal Oxide	AA
R3104	VRS-TW2ED151J	J	150 1/4W Metal Oxide	AA	R3707	VRS-CY1JF101J	J	100 1/16W Metal Oxide	AA
R3105	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA	R3708	VRS-CY1JF223F	J	22k 1/16W Metal Oxide	AA
R3106	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA	R3709	VRS-CY1JF392F	J	3.9k 1/16W Metal Oxide	AA
R3107	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA	R3711	VRS-CY1JF101J	J	100 1/16W Metal Oxide	AA
R3108	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA	R3715	VRS-CE3AF3R3JY	J	3.3 1W Metal Oxide	AC
R3109	VRS-TW2ED151J	J	150 1/4W Metal Oxide	AA	R3716	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3111	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA	R3717	VRS-CE3AF2R2JY	J	2.2 1W Metal Oxide	AC
R3113	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA	R3718	VRS-CY1JF223F	J	22k 1/16W Metal Oxide	AA
R3114	VRS-CY1JF305JY	J	3M 1/16W Metal Oxide	AA	R3851	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3115	VRS-TX2HF2R2J	J	2.2 1/2W Metal Oxide	AB	R3852	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3116	VRS-CY1JF390FY	J	39 1/16W Metal Oxide	AA	R3856	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3118	VRS-CY1JF562F	J	5.6k 1/16W Metal Oxide	AA	R3857	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3119	VRS-CY1JF101J	J	100 1/16W Metal Oxide	AA	R3858	VRS-CY1JF821J	J	820 1/16W Metal Oxide	AA
R3120	VRS-CY1JF222F	J	2.2k 1/16W Metal Oxide	AA	R3863	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R3121	VRS-CY1JF472F	J	4.7k 1/16W Metal Oxide	AA	R3864	VRS-TV1JD750J	J	75 1/16W Metal Oxide	AA
R3122	VRS-CY1JF682J	J	6.8k 1/16W Metal Oxide	AA	R3865	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R3123	VRS-CY1JF101J	J	100 1/16W Metal Oxide	AA	R3866	VRS-TV1JD750J	J	75 1/16W Metal Oxide	AA
R3124	VRS-CY1JF472J	J	4.7k 1/16W Metal Oxide	AA	R3867	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R3125	VRS-CE3AF5R6JY	J	5.6 1W Metal Oxide	AC	R3868	VRS-TV1JD750J	J	75 1/16W Metal Oxide	AA
R3126	VRS-CE3AF5R6JY	J	5.6 1W Metal Oxide	AC	R3870	VRS-CY1JF101J	J	100 1/16W Metal Oxide	AA
R3201	RBLN-0060TAZZ	J	Ferrite Bead	AB	R3871	VRS-CY1JF101J	J	100 1/16W Metal Oxide	AA
R3206	VRS-CY1JF104J	J	100k 1/16W Metal Oxide	AA	R3872	VRS-CB1JF223J	J	22k 1/16W Metal Oxide	AA
R3207	VRS-CY1JF752F	J	7.5k 1/16W Metal Oxide	AA	R3873	VRS-CB1JF223J	J	22k 1/16W Metal Oxide	AA
R3209	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA	R3877	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R3212	VRS-CY1JF154J	J	150k 1/16W Metal Oxide	AA	R3878	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R3213	VRS-CY1JF224J	J	220k 1/16W Metal Oxide	AA	R3879	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R3216	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA	R3904	VRS-CY1JF112F	J	1.1k 1/16W Metal Oxide	AA
R3222	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA	R3905	VRS-CY1JF151F	J	150 1/16W Metal Oxide	AA
R3225	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA	R3907	VRS-CY1JF102J	J	1.0k 1/16W Metal Oxide	AA
R3226	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA	R3908	VRS-CY1JF272F	J	2.7k 1/16W Metal Oxide	AA
R3227	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA	R3909	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R3229	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA	R3910	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R3230	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA	R3914	VRS-CY1JF821J	J	820 1/16W Metal Oxide	AA
R3231	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA	R3915	VRS-CY1JF333J	J	33k 1/16W Metal Oxide	AA
R3232	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA	R3916	VRS-CY1JF821J	J	820 1/16W Metal Oxide	AA
R3233	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA	R3917	VRS-CY1JF470J	J	47 1/16W Metal Oxide	AA
R3234	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA	R3918	VRS-CY1JF123J	J	12k 1/16W Metal Oxide	AA
MISCELLANEOUS PARTS									
FB3101	RBLN-0210TAZZ	J	Ferrite Bead	AB	FB3102	RBLN-0062CEZZ	J	Ferrite Bead	AC
FB3103	RBLN-0059CEZZ	J	Ferrite Bead	AB	FB3201	RBLN-0060TAZZ	J	Ferrite Bead	AB
FB3202	RBLN-0060TAZZ	J	Ferrite Bead	AB	FB3203	RBLN-0060TAZZ	J	Ferrite Bead	AB
FB3301	RBLN-0064TAZZ	J	Ferrite Bead	AC	FB3302	RBLN-0058CEZZ	J	Ferrite Bead	AB
FB3303	RBLN-0058CEZZ	J	Ferrite Bead	AB	FB3304	RBLN-0064TAZZ	J	Ferrite Bead	AC
J3201	QSOCNA005WJZZ	J	Jack, 4-pin	AE	J3301	QJAKJ0066CEZZ	J	Jack , PC Audio IN	AE
J3501	QJAKEA002WJZZ	J	Jack, Video IN	AD	J3502	QSOCD0426CEZZ	J	Din Jack Socket	AE
P3002	QSOCN3278TAZZY	J	Plug, 32-pin	AF	P3003	QSOCN3078TAZZ	J	Plug, 30-pin	AE
P3101	QPLGN0198FJZZ	J	Plug, 3-pin	AD	SC3001	QCNCW8002WJZZY	J	Socket, 80-pin	AL
SC3101	QSOCN0401WJZZY	J	Socket, 4-pin	AC	SC3701	QSOCZ1338CEZZ	J	Socket, 13-pin	AD
LANGF9661CEFW	LANGF9661CEFW	J	Angle	AF	XBBSD20P03000	XBBSD20P03000	J	Screw	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
DUNTKB067DE01 (PG-M20X) DUNTKB067DE03 (PG-M20S) KEY UNIT									
INTEGRATED CIRCUITS									
IC2001 RH-iXA128WJZZQ J IC AQ									
IC2002 VHiBD4729G+-1Y J BD4729G-TR AD									
IC2004 VHiSNAT541P-1Y J SNAT541P AF									
IC2005 VHiSNHC32T/-1 J SN74HC32PW AG									
IC2010 VHiPQ1R33/-1 J PQ1R33 AE									
IC2011 VHiPQ1R50/-1 J PQ1R50 AF									
IC2101 VHIBA00ASFP-1 J BA00ASFP-E2 AG									
IC2102 VHIBA00ASFP-1 J BA00ASFP-E2 AG									
IC2103 VHIBA00ASFP-1 J BA00ASFP-E2 AG									
IC2104 VHIBA00ASFP-1 J BA00ASFP-E2 AG									
TRANSISTORS									
Q2001 VSDTC114EE/-1 J DTC114EE AB									
Q2002 VSDTC114EE/-1 J DTC114EE AB									
Q2003 VS2SB1132Q/-1 J 2SB1132Q AC									
Q2004 VS2SA1530AR-1 J 2SA1530AR AB									
Q2101 VSDTC114EE/-1 J DTC114EE AB									
Q2201 VSDTC144EUA-1 J DTC144EUA AB									
Q2202 VSDTC144EUA-1 J DTC144EUA AB									
Q2203 VSDTC144EUA-1 J DTC144EUA AB									
Q2204 VSDTC144EUA-1 J DTC144EUA AB									
Q2205 VSDTC144EUA-1 J DTC144EUA AB									
DIODES									
D2001 VHDDAN222/-1 J Diode AA									
D2002 VHDDAN222/-1 J Diode AA									
D2003 VHDFO1J2E/-1 J Diode AC									
D2101 VHDDAN202K/-1 J Diode AB									
D2102 VHDDAN202K/-1 J Diode AB									
D2103 VHDDAN202K/-1 J Diode AB									
D2104 VHDDAN202K/-1 J Diode AB									
D2105 VHDDAN202K/-1 J Diode AB									
D2106 VHDDAN202K/-1 J Diode AB									
D2201 RH-PX0210TAZZY J Diode AC									
D2202 RH-PX0210TAZZY J Diode AC									
D2203 RH-PX0210TAZZY J Diode AC									
PACKAGED CIRCUIT									
X2001 RCRSB0286CEZZ J Crystal AH									
CAPACITORS									
C2001 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2002 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2003 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2004 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2005 VCKYCY1AF105Z J 1 10V Ceramic AC									
C2006 VCKYCY1AF105Z J 1 10V Ceramic AC									
C2007 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2010 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2011 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2012 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2013 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2014 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2015 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2016 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2017 VCEASM0JW476MY J 47 6.3V Electrolytic AC									
C2019 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2020 VCCCCY1HH220J J 22p 50V Ceramic AA									
C2021 VCCCCY1HH220J J 22p 50V Ceramic AA									
C2022 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2023 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2024 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2025 VCEASM1CW106MY J 10 16V Electrolytic AC									
C2026 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2027 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2028 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2029 VCEASM1CW106MY J 10 16V Electrolytic AC									
C2030 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2101 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2103 VCEASM1EW336MY J 33 25V Electrolytic AC									
C2104 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2105 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2106 VCEASM1CW107MY J 100 16V Electrolytic AD									
C2108 VCEASM1EW336MY J 33 25V Electrolytic AC									
C2109 VCEASM1EW336MY J 33 25V Electrolytic AC									
C2110 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2111 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2112 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2113 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2114 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2115 VCEASM1CW107MY J 100 16V Electrolytic AD									
C2116 VCEASM1CW107MY J 100 16V Electrolytic AD									
C2117 VCEASM1EW336MY J 33 25V Electrolytic AC									
C2118 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2119 VCEASM1CW107MY J 100 16V Electrolytic AD									
C2120 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2201 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
C2202 VCEASM1CW226MY J 22 16V Electrolytic AC									
C2203 VCKYCY1EF104Z J 0.1 25V Ceramic AA									
RESISTORS									
R2001 VRS-CY1JF000J J 0 1/16W Metal Oxide AA									
R2004 VRS-CY1JF000J J 0 1/16W Metal Oxide AA									
R2005 VRS-CY1JF471J J 470 1/16W Metal Oxide AA									
R2006 VRS-CY1JF103J J 10k 1/16W Metal Oxide AA									
R2007 VRS-CY1JF100J J 10 1/16W Metal Oxide AA									
R2008 VRS-CY1JF103J J 10k 1/16W Metal Oxide AA									
R2009 VRS-CY1JF100J J 10 1/16W Metal Oxide AA									
R2010 VRS-CY1JF102J J 1k 1/16W Metal Oxide AA									
R2011 VRS-CY1JF102J J 1k 1/16W Metal Oxide AA									
R2012 VRS-CY1JF104J J 100k 1/16W Metal Oxide AA									
R2013 VRS-CY1JF222J J 2.2k 1/16W Metal Oxide AA									
R2014 VRS-CY1JF101J J 100 1/16W Metal Oxide AA									
R2016 VRS-CY1JF101J J 100 1/16W Metal Oxide AA									
R2018 VRS-CY1JF104J J 100k 1/16W Metal Oxide AA									
R2019 VRS-CY1JF101J J 100 1/16W Metal Oxide AA									
R2020 VRS-CY1JF104J J 100k 1/16W Metal Oxide AA									
R2021 VRS-CY1JF102J J 1k 1/16W Metal Oxide AA									
R2022 VRS-CY1JF102J J 1k 1/16W Metal Oxide AA									
R2023 VRS-CY1JF102J J 1k 1/16W Metal Oxide AA									
R2025 VRS-TV1JD471J J 470 1/16W Metal Oxide AA									
R2027 VRS-CY1JF000J J 0 1/16W Metal Oxide AA									
R2029 VRS-CY1JF103J J 10k 1/16W Metal Oxide AA									
R2030 VRS-CY1JF103J J 10k 1/16W Metal Oxide AA									
R2032 VRS-CY1JF103J J 10k 1/16W Metal Oxide AA									
R2033 VRS-CY1JF103J J 10k 1/16W Metal Oxide AA									
R2101 VRS-CY1JF101J J 100 1/16W Metal Oxide AA									
R2103 VRS-TW2ED2R2J J 2.2 1/4W Metal Oxide AB									
R2104 VRS-CY1JF472F J 4.7k 1/16W Metal Oxide AA									
R2105 VRS-CY1JF102J J 1k 1/16W Metal Oxide AA									
R2106 VRS-CY1JF822F J 8.2k 1/16W Metal Oxide AA									
R2108 VRS-CY1JF682J J 6.8k 1/16W Metal Oxide AA									
R2109 VRS-CY1JF101J J 100 1/16W Metal Oxide AA									
R2110 VRS-CB1JF472J J 4.7k 1/16W Metal Oxide AC									
R2111 VRS-TW2ED2R2J J 2.2 1/4W Metal Oxide AB									
R2112 VRS-TW2ED2R2J J 2.2 1/4W Metal Oxide AB									
R2113 VRS-CY1JF101J J 100 1/16W Metal Oxide AA									
R2114 VRS-CY1JF332F J 3.3k 1/16W Metal Oxide AA									
R2115 VRS-CY1JF101J J 100 1/16W Metal Oxide AA									
R2116 VRS-CY1JF472F J 4.7k 1/16W Metal Oxide AA									
R2117 VRS-CY1JF102F J 1k 1/16W Metal Oxide AA									
R2118 VRS-CY1JF683F J 68k 1/16W Metal Oxide AA									
R2120 VRS-CY1JF102F J 1k 1/16W Metal Oxide AA									
R2121 VRS-CY1JF103F J 10k 1/16W Metal Oxide AA									
R2122 VRS-CY1JF822F J 8.2k 1/16W Metal Oxide AA									
R2124 VRS-CY1JF000J J 0 1/16W Metal Oxide AA									

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
DUNTKB067DE01 (PG-M20X)									
DUNTKB067DE03 (PG-M20S)									
KEY UNIT (Continued)									
R2202	VRS-CB1JF102J	J	1k	1/16W	Metal Oxide	AA	INTEGRATED CIRCUITS		
R2203	VRS-CY1JF103J	J	10k	1/16W	Metal Oxide	AA	IC701	95CH3151AC001	J FA5502M
R2204	VRS-CB1JF103J	J	10k	1/16W	Metal Oxide	AA	IC702	95C0H1R1A0010	J MIP0254SPSCF
R2205	VRS-CY1JF562J	J	5.6k	1/16W	Metal Oxide	AA	IC703	95C0H1Q3A0010	J TA76431
R2206	VRS-CY1JF562J	J	5.6k	1/16W	Metal Oxide	AA	IC7501	95C0H1Q3A0010	J TA76431
R2207	VRS-CY1JF562J	J	5.6k	1/16W	Metal Oxide	AA	TRANSISTORS		
R2208	VRS-CY1JF562J	J	5.6k	1/16W	Metal Oxide	AA	Q701	95CT2837KL001	J 2SK2837
R2209	VRS-TW2ED221J	J	220	1/4W	Metal Oxide	AA	Q702	95C0T394A0010	J 2SC4081
R2210	VRS-TW2ED681J	J	680	1/4W	Metal Oxide	AA	Q703	95C0T192A0010	J 2SA1576A
R2211	VRS-TW2ED221J	J	220	1/4W	Metal Oxide	AA	Q711	95C0T394A0010	J 2SC4081
R2212	VRS-TW2ED681J	J	680	1/4W	Metal Oxide	AA	Q712	95C0T192A0010	J 2SA1576A
R2213	VRS-TW2ED681J	J	680	1/4W	Metal Oxide	AA	Q715	95C0T192A0010	J 2SA1576A
R2214	VRS-CY1JF682J	J	6.8k	1/16W	Metal Oxide	AA	Q7407	95C0T394A0010	J 2SC4081
R2215	VRS-CY1JF682J	J	6.8k	1/16W	Metal Oxide	AA	Q7501	95C0T397A0010	J 2SC4672K
R2216	VRS-CY1JF682J	J	6.8k	1/16W	Metal Oxide	AA	Q7502	95C0T394A0010	J 2SC4081
SWITCHES									
SW2001	QSW-KA001WJZZY	J	Switch		AD	Q7503	95C0T192A0010	J 2SA1576A	
SW2002	QSW-S0203TAZZ	J	Switch		AD	DIODES			
SW2201	QSW-KA001WJZZY	J	Switch		AD	D701	95CD1132AL006	J D25XB60	
SW2202	QSW-KA001WJZZY	J	Switch Lens		AD	D702	95CD2172AL006	J FS10L60U	
SW2203	QSW-KA001WJZZY	J	Switch Menu		AD	D703	95C0D2Q3A0040	J EC10QS04	
SW2204	QSW-KA001WJZZY	J	Switch Auto Sync		AD	D705	95C0D157A0060	J ERA15-06	
SW2205	QSW-KA001WJZZY	J	Switch AV Mute		AD	D706	95C0D157A0060	J ERA15-06	
SW2206	QSW-KA001WJZZY	J	Switch Cursor Up		AD	D707	95C0D157A0060	J ERA15-06	
SW2207	QSW-KA001WJZZY	J	Switch Cursor Down		AD	D708	95C0D157A0060	J ERA15-06	
SW2208	QSW-KA001WJZZY	J	Switch Cursor Left		AD	D709	95C0D295A0080	J 1SS355	
SW2209	QSW-KA001WJZZY	J	Switch Cursor Right		AD	D710	95C0D295A0080	J 1SS355	
SW2210	QSW-KA001WJZZY	J	Switch Undo		AD	D713	95C0D295A0080	J 1SS355	
SW2211	QSW-KA001WJZZY	J	Switch Input		AD	D714	95C0D295A0080	J 1SS355	
SW2212	QSW-KA001WJZZY	J	Switch Enter		AD	D716	95C0D492A0020	J UDZS 5.6B	
MISCELLANEOUS PARTS									
FB2003	RBLN-0064TAZZ	J	Ferrite Bead		AC	D725	95C0D157A0060	J ERA15-06	
FB2004	RBLN-0064TAZZ	J	Ferrite Bead		AC	D729	95C0D491A0290	J UDV 30B	
FB2101	RBLN-0064TAZZ	J	Ferrite Bead		AC	D730	95C0D291A0010	J EC11FS4	
FB2102	RBLN-0059CEZZ	J	Ferrite Bead		AB	D7501	95C0D279A0100	J 21DQ10 TA2B1	
FB2103	RBLN-0064TAZZ	J	Ferrite Bead		AC	D7503	95C0D265A0020	J ERA91-02	
FB2104	RBLN-0059CEZZ	J	Ferrite Bead		AB	D7504	95C0D295A0080	J 1SS355	
FB2105	RBLN-0064TAZZ	J	Ferrite Bead		AC	D7505	95C0D295A0080	J 1SS355	
FB2106	RBLN-0059CEZZ	J	Ferrite Bead		AB	TRA701	95C0D513A6120	J SM12JZ47	
FB2107	RBLN-0064TAZZ	J	Ferrite Bead		AC	△ Z701	95C0D758A4710	J ENC471	
FB2108	RBLN-0064TAZZ	J	Ferrite Bead		AC	PACKAGED CIRCUITS			
FB2109	RBLN-0064TAZZ	J	Ferrite Bead		AC	△ PC701	95C0H723A0010	J PC123FY8	
FB2110	RBLN-0059CEZZ	J	Ferrite Bead		AB	△ PC704	95C0H723A0010	J PC123FY8	
P2001	QSOCN3271TAZZ	J	Plug, 32-pin(KY)		AE	△ PC705	95C0H723A0010	J PC123FY8	
P2002	QPLGN0264TAZZ	J	Plug, 2-pin(SP)		AC	PTC701	95C0D802A1010	J PTH9M04BD222TS2F333	
P2003	QPLGN0664TAZZ	J	Plug, 6-pin(EB)		AD	COILS			
P2101	QPLGN0464TAZZ	J	Plug, 4-pin(F1)		AC	L701	95CL1107RL502	J FK-080G-5020H2	
P2102	QPLGN0364TAZZ	J	Plug, 3-pin(F2)		AC	L704	95C0L115R1110	J SK-10M-5YRP	
P2103	QPLGN0463TAZZ	J	Plug, 4-pin(F3)		AC	L703	95CL1109RL401	J HKBS-12D080-9710RS	
P2104	QPLGN0363TAZZ	J	Plug, 3-pin(F5)		AC	TRANSFORMERS			
KEY UNIT (Continued)									
△ T7301	95CL2000BS026	J	2B26		CAPACITORS				
KEY UNIT (Continued)									
C700	95C0C247M4740	J	0.47	AC450V	Film	C700	95C0C247M4740	J 0.47	AC450V Film
C701	95C0C245Q4740	J	0.47	AC250V	Film	C701	95C0C245Q4740	J 0.47	AC250V Film
C702	95CC3105MR100	J	10	400V	Electrolytic	C702	95CC3105MR100	J 10	400V Electrolytic
△ C703	95C0C1H8Q2220	J	2200p	AC250V	Ceramic	△ C703	95C0C1H8Q2220	J 2200p	AC250V Ceramic
△ C704	95C0C1H8Q2220	J	2200p	AC250V	Ceramic	△ C704	95C0C1H8Q2220	J 2200p	AC250V Ceramic
C705	95C0C245Q4740	J	0.47	AC250V	Film	C705	95C0C245Q4740	J 0.47	AC250V Film
C706	95C0C247M4740	J	0.47	AC450V	Film	C706	95C0C247M4740	J 0.47	AC450V Film
C707	95CC3124ML151	J	150	400V	Electrolytic	C707	95CC3124ML151	J 150	400V Electrolytic
C708	95C0C3A0D1510	J	150	35V	Electrolytic	C708	95C0C3A0D1510	J 150	35V Electrolytic
C709	95C0C195C1040	J	0.1	25V	Ceramic	C709	95C0C195C1040	J 0.1	25V Ceramic
C710	95C0C1B2S4700	J	47p	2kV	Ceramic	C710	95C0C1B2S4700	J 47p	2kV Ceramic
C711	95C0C1Q0A1060	J	10	6.3V	Ceramic	C711	95C0C1Q0A1060	J 10	6.3V Ceramic
C712	95C0C195C1040	J	0.1	25V	Ceramic	C712	95C0C195C1040	J 0.1	25V Ceramic
C713	95C0C195C1040	J	0.1	25V	Ceramic	C713	95C0C195C1040	J 0.1	25V Ceramic
C714	95CC1102EC102	J	1000p	50V	Ceramic	C714	95CC1102EC102	J 1000p	50V Ceramic

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code					
RDENCA004WJZZ (PG-M20X)														
RDENCA004WJN1 (PG-M20S)														
PFC UNIT (Continued)														
C715	95C0C195C3330	J	0.033 25V Ceramic		R785	95C0R3Q4S3320	J	3.3k 1/16W Chip1608	AH					
C716	95C0C194E1010	J	100p 50V Ceramic	AC	R791	95C0R390T8230	J	82k 1/4W Chip3216	AC					
C717	95C0C195E1030	J	0.01 50V Ceramic	AC	R792	95C0R390T8230	J	82k 1/4W Chip3216	AC					
C718	95C0C195E1030	J	0.01 50V Ceramic	AC	R793	95C0R390T8230	J	82k 1/4W Chip3216	AC					
C719	95C0C194E3310	J	330p 50V Ceramic	AC	R7466	95C0R3Q4S6810	J	680 1/16W Chip1608	AH					
C720	95C0C198E4740	J	0.47 50V Ceramic		R7467	95C0R3Q4S1020	J	1k 1/16W Chip1608	AH					
C721	95C0C1A9R3310	J	330p 1kV Ceramic	AH	R7468	95C0R3Q4S1030	J	10k 1/16W Chip1608	AH					
C722	95C0C1B2S4700	J	47p 2kV Ceramic		R7469	95C0R3Q4S1030	J	10k 1/16W Chip1608	AH					
C723	95C0C1H8Q3320	J	3300p AC250V Ceramic	AS	R7501	95C0R3Q4S2220	J	2.2k 1/16W Chip1608	AH					
C724	95C0C194E1020	J	1000p 50V Ceramic	AK	R7502	95C0R3Q0V8210	J	820 1/8W						
C725	95C0C195C1040	J	0.1 25V Ceramic	AD	R7503	95C0R3Q4S3330	J	33k 1/16W Chip1608	AH					
C726	95C0C195E1030	J	0.01 50V Ceramic	AC	R7504	95C0R3Q8S3320	J	3.3k 1/16W Chip1608						
△ C727	95C0C1H8Q4710	J	470p AC250V Ceramic	AG	R7505	95C0R3Q8S1520	J	1.5k 1/16W Chip1608						
△ C728	95C0C1H8Q2220	J	2200p AC250V Ceramic	AH	R7508	95C0R3Q8S1220	J	1.2k 1/16W Chip1608						
C729	95C0C195E1030	J	0.01 50V Ceramic	AC	R7509	95C0R3Q3V5610	J	560 1/10W Chip2012						
△ C730	95C0C1H8Q1020	J	1000p AC250V Ceramic	AH	R7514	95C0R3Q0V1030	J	10k 1/8W Chip2012	AB					
△ C731	95C0C1H8Q1020	J	1000p AC250V Ceramic	AH	R7515	95C0R3Q4S1020	J	1k 1/16W Chip1608	AH					
C734	95C0C377M1R00	J	1 400V Electrolytic	AM	R7516	95C0R390T1000	J	10 1/4W Chip3216	AC					
C7501	95C0C3A0A1020	J	1000 10V Electrolytic		R7517	95C0R390T1000	J	10 1/4W Chip3216	AC					
C7502	95C0C195C1040	J	0.1 25V Ceramic	AD	R7518	95C0R390T1000	J	10 1/4W Chip3216	AC					
C7503	95C0C195C1040	J	0.1 25V Ceramic	AD	R7519	95C0R390T1000	J	10 1/4W Chip3216	AC					
C7504	95C0C195E1040	J	0.1 50V Ceramic	AF	R7520	95C0R3Q4S1030	J	10k 1/16W Chip1608	AH					
C7505	95C0C1Q0A1060	J	10 6.3V Ceramic	AQ	R7521	95C0R3Q4S2220	J	2.2k 1/16W Chip1608	AH					
C7506	95C0C195C1040	J	0.1 25V Ceramic	AD	R7522	95C0R3Q4S1030	J	10k 1/16W Chip1608	AH					
C7507	95C0C198E4740	J	0.47 50V Ceramic		R7523	95C0R3Q4S1030	J	10k 1/16W Chip1608	AH					
C7508	95C0C3A0B4710	J	470 16V Electrolytic		R7524	95C0R3Q0V5620	J	5.6k 1/8W	AB					
C7509	95C0C198E4740	J	0.47 50V Ceramic		R7525	95C0R3Q0V2720	J	2.7k 1/8W						
RESISTORS														
R701	95CR3107SC563	J	56k 1/16W		R7526	95C0R3Q0V2720	J	2.7k 1/8W						
R702	95C0R390T1540	J	150k 1/4W Chip3216	AC	MISCELLANEOUS PARTS									
R703	95C0R390T1540	J	150k 1/4W Chip3216	AC	△ RL701	95CK3102AL001	J	DG5D2-0(M)						
R704	95C0R390T1540	J	150k 1/4W Chip3216	AC	BEA701	95C0L551A0020	J	BL02RN2-R62 T2	AE					
R705	95CR3107SC563	J	56k 1/16W		BEA703	95C0L551A0010	J	BL02RN1-R62 T2	AD					
R706	95C0R3Q4S1010	J	100 1/16W Chip1608	AH	BEA704	95CBP53RA035	J	BPR53RA035013030M						
R707	95C0R522F1000	J	10 5W Fuse Resistor	AQ	△ F701	95C0K718A6R30	J	Fuse, AC250V 6.3AH 215	AN					
R708	95C0R3Q4S1040	J	100k 1/16W	AH	FH1	95C0M850A0010	J	TP00351-51	AK					
R709	95C0R391T2240	J	220k 1/4W Chip3216	AH	FH2	95C0M850A0010	J	TP00351-51	AK					
R710	95C0R391T2240	J	220k 1/4W Chip3216	AH	CN701	95CK2105SL001	J	NC-179-L2						
R711	95C0R391T2240	J	220k 1/4W Chip3216	AH	CN702	95C0K251A0020	J	B2P3-VH	AF					
R712	95C0R3Q3V1000	J	10 1/10W Chip2012		CN704	95C0K248A0050	J	B5B-EH-A						
R713	95C0R391T1840	J	180k 1/4W		CN7001	95CK2102FS013	J	TWG-P13P-A1						
R714	95C0R391T1840	J	180k 1/4W	AC	CN7002	95C0WPF2014A0	J	CONNECTOR						
R715	95C0R391T1840	J	180k 1/4W	AC	CN7003	95C0K202B0020	J	B2B-PH-K-S	AK					
R716	95C0R516FR050	J	0.05 3W	AQ	CN7004	95C0K248A0020	J	B2B-EH-A						
R717	95C0R3Q4S1240	J	120k 1/16W Chip1608		CN7103	95CK2106KS012	J	MDF7-12D-2.54DSA(01)						
R718	95C0R3Q0V2700	J	27 1/8W		HS1	95C0MPF002800	J	Shield						
R719	95C0R390T3300	J	33 1/4W Chip3216	AC	HS2	95C0MPF002900	J	Shield						
R720	95C0R3Q8S1820	J	1.8k 1/16W Chip1608											
R721	95C0R3Q8S3630	J	36k 1/16W Chip1608											
R722	95C0R3Q4S3330	J	33k 1/16W Chip1608	AH										
R723	95C0R390T4700	J	47 1/4W Chip3216	AH										
R724	95C0R3Q4S3940	J	390k 1/16W Chip1608											
R725	95C0R3Q8S2220	J	2.2k 1/16W Chip1608	AH										
R726	95C0R3Q4S1030	J	10k 1/16W Chip1608	AH										
R736	95C0R3Q8S1030	J	10k 1/16W Chip1608											
R765	95C0R390T3920	J	3.9k 1/4W											
R768	95C0R3Q4S2720	J	2.7k 1/16W Chip1608											
R769	95C0R3Q8S6810	J	680 1/16W Chip1608											
R771	95C0R390T0000	J	0 1/4W Chip3216	AC										
R772	95C0R391T1840	J	180k 1/4W											
R773	95C0R391T1840	J	180k 1/4W											
R774	95C0R391T1840	J	180k 1/4W											
R775	95C0R3Q8S5620	J	5.6k 1/16W Chip1608											
R776	95C0R3Q0V3310	J	330 1/8W Chip2012											
R777	95C0R3Q0V5620	J	5.6k 1/8W Chip2012	AB										
R778	95C0R3Q4S2230	J	22k 1/16W Chip1608	AH										
R779	95C0R3Q4S6840	J	680k 1/16W Chip1608											
R780	95C0R3Q0V1030	J	10k 1/8W Chip2012	AB										
R781	95C0R3Q0V1030	J	10k 1/8W Chip2012	AB										
R783	95C0R3Q4S3340	J	330k 1/16W Chip1608	AH										
R784	95C0R3Q4S1020	J	1k 1/16W Chip1608	AH										

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code					
RDENCA010WJZZ POWER UNIT														
INTEGRATED CIRCUITS														
TRANSISTORS														
IC7101	95C0H1Q3A0010	J	TA76431	AQ	C7429	95CC3128AS471	J	470 10V	Electrolytic					
IC7401	95C0H1R3A0010	J	BA9743AFV-E2		C7451	95C0C195E4730	J	0.047 50V	Ceramic					
Q7301	95C0T601B0010	J	2SK2605		C7452	95C0C195E1040	J	0.1 50V	Ceramic					
Q7302	95C0T395A0010	J	2SC4097		C7453	95C0C195E1040	J	0.1 50V	Ceramic					
Q7320	95C0T601B0010	J	2SK2605		C7454	95C0C1Q1E2210	J	220p 50V	Ceramic					
Q7322	95C0T395A0010	J	2SC4097		C7455	95C0C195E4730	J	0.047 50V	Ceramic					
Q7330	95C0T196A0010	J	2SA1812	AS	RESISTORS									
Q7340	95C0T395A0010	J	2SC4097		R7101	95C0R3Q4S3910	J	390 1/16W	AH					
Q7402	95C0T395A0010	J	2SC4097		R7102	95C0R3Q4S1030	J	10k 1/16W	AH					
Q7403	95C0T193A0010	J	2SA1577		R7103	95C0R3Q8S3320	J	3.3k 1/16W	AH					
Q7405	95C0T593A0010	J	UPA1710AG		R7104	95C0R3Q8S2720	J	2.7k 1/16W	AH					
Q7422	95C0T395A0010	J	2SC4097		R7105	95C0R3Q4S2220	J	2.2k 1/16W	AH					
Q7423	95C0T193A0010	J	2SA1577		R7106	95C0R3Q3V5610	J	560 1/10W	AH					
Q7425	95C0T593A0010	J	UPA1710AG		R7305	95C0R3Q4S2230	J	22k 1/16W	AH					
Q7461	95C0T193A0010	J	2SA1577		R7306	95C0R390T3320	J	3.3k 1/4W	AC					
Q7462	95C0T395A0010	J	2SC4097		R7307	95C0R3Q4S3310	J	330 1/16W						
DIODES														
D711	95C0D292A0020	J	SC902-2	AM	R7308	95C0R3Q4S3320	J	3.3k 1/16W	AH					
D712	95C0D292A0020	J	SC902-2	AM	R7309	95C0R3Q4S1010	J	100 1/16W	AH					
D7101	95C0D224B0060	J	YG802C06R	AR	R7310	95C0R3Q8S8210	J	820 1/16W	AH					
D7102	95C0D2Q0A0100	J	EC31QS10		R7311	95C0R3Q8S4720	J	4.7k 1/16W	AH					
D7103	95C0D2Q0A0100	J	EC31QS10		R7312	95C0R3Q8S4730	J	47k 1/16W	AH					
D7104	95C0D2Q0A0100	J	EC31QS10		R7314	95C0R390T3320	J	3.3k 1/4W	AC					
D7110	95C0D461A1900	J	HZ-18	AH	R7317	95C0R3Q3V5610	J	560 1/10W	AH					
D7304	95C0D295A0080	J	1SS355	AE	R7320	95C0R3Q4S2230	J	22k 1/16W	AH					
D7306	95C0D295A0080	J	1SS355	AE	R7321	95C0R390T1520	J	1.5k 1/4W						
D7307	95C0D295A0080	J	1SS355	AE	R7322	95C0R3Q4S3320	J	3.3k 1/16W	AH					
D7308	95C0D491A0300	J	UDZ 33B		R7323	95C0R3Q4S2240	J	220k 1/16W	AH					
D7309	95C0D491A0300	J	UDZ 33B		R7324	95C0R3Q8S2220	J	2.2k 1/16W	AH					
D9321	95C0D492A0040	J	UDZS 6.8B		R7325	95C0R390T1030	J	10k 1/4W						
D7322	95C0D295A0080	J	1SS355		R7327	95C0R3Q4S6820	J	6.8k 1/16W	AH					
D7330	95C0D491A0250	J	UDZ 20B	AE	R7330	95C0R3Q4S3330	J	33k 1/16W	AH					
D7340	95C0D295A0080	J	1SS355	AM	R7331	95C0R3Q4S3330	J	33k 1/16W	AH					
D7401	95C0D2Q0A0030	J	EC31QS03L		R7332	95C0R3Q4S3330	J	33k 1/16W	AH					
D7402	95C0D2Q0A0030	J	EC31QS03L		R7333	95C0R390T5640	J	560k 1/4W	AH					
D7421	95C0D2Q0A0030	J	EC31QS03L		R7334	95C0R390T5640	J	560k 1/4W	AH					
D7422	95C0D2Q0A0030	J	EC31QS03L		R7335	95C0R390T5640	J	560k 1/4W	AH					
COILS AND TRANSFORMERS														
L7401	95COL150S1000	J	18261A(10uH)		R7336	95C0R3Q4S3930	J	39k 1/16W						
L7421	95COL150S1000	J	18261A(10uH)	AN	R7340	95C0R375DR330	J	0.33 2W						
△ T701	95CL2000JS039	J	2J39		R7341	95C0R3Q3V1010	J	100 1/10W						
PACKAGED CIRCUIT														
△ PC7301	95C0H723A0010	J	PC123FY8	AM	R7342	95C0R3Q8S1030	J	10k 1/16W	AH					
CONTROL														
VR7401	95C0R854E1030	J	10k 1/10W		R7401	95C0R3Q8S2220	J	2.2k 1/16W	AH					
CAPACITORS														
C7101	95CC3128B5122	J	1200 16V		R7403	95C0R3Q8S2220	J	2.2k 1/16W	AH					
C7103	95CC3128CS681	J	680 25V		R7424	95C0R3Q8S1220	J	1.2k 1/16W						
C7105	95C0C195C1040	J	0.1 25V		R7428	95C0R3Q4S1520	J	1.5k 1/16W						
C7110	95C0C1A9L4720	J	4700p 250V		R7429	95C0R3Q4S0000	J	0 1/16W	AH					
C7309	95C0C193A4720	J	4700p 50V		R7431	95C0R3Q4S4700	J	47 1/16W						
C7310	95C0C1Q2E1030	J	0.01 50V		R7435	95C0R3Q4S1540	J	150k 1/16W						
C7311	95C0C1Q1E1010	J	100p 50V		R7451	95C0R3Q8S4730	J	47k 1/16W						
C7320	95C0C2X5L4730	J	0.047 250V		R7452	95C0R3Q8S3930	J	39k 1/16W	AH					
C7321	95C0C1Q2E4720	J	4700p 50V		R7453	95C0R3Q8S4730	J	47k 1/16W						
C7322	95C0C193A4720	J	4700p 50V		R7454	95C0R3Q8S3930	J	39k 1/16W	AH					
C7323	95C0C1B2S4700	J	47p 2kV		R7455	95C0R3Q4S3330	J	33k 1/16W	AH					
C7330	95C0C195E1040	J	0.1 50V		R7456	95C0R3Q4S1240	J	120k 1/16W						
C7404	95C0C195E1030	J	0.01 50V		R7457	95C0R3Q4S2240	J	220k 1/16W	AH					
C7406	95C0C195E4710	J	470p 50V		R7458	95C0R3Q4S3300	J	33 1/16W						
C7408	95CC3128AS471	J	470 10V		R7462	95C0R3Q4S1030	J	10k 1/16W	AH					
C7424	95C0C195E1030	J	0.01 50V		R7463	95C0R3Q4S1030	J	10k 1/16W	AH					
C7426	95C0C195E4710	J	470p 50V		R7464	95C0R3Q4S1030	J	10k 1/16W	AH					
					R7465	95C0R3Q4S1220	J	1.2k 1/16W						
MISCELLANEOUS PARTS														
BEA7301	95C0L551A0020	J	BL02RN2-R62 T2											
CN7102	95CK2107KS012	J	MDF7P-12DP-2.54DSA											
CN7101	95C0WPF2013B0	J	Plug, 5-pin											

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
CPCi-0057CE01 (PG-M20X)									
CPCi-0057CE31 (PG-M20S)									
PC I/F UNIT									
INTEGRATED CIRCUITS									
IC3	9DK001-11020	J	AT24C128N-10SC-1.8	AS	L5	9DK001-81052	J	NLC322522T-3R3M 3.3µH	AG
IC4	9DK001-15115	J	PQ05VY3H3Z	AM	L6	9DK001-81062	J	BLM21P221SG	AE
IC5	RH-iXA148WJZZQ	J	LH28F640BXXE(PG-M20X)	BG	L7	9DK001-81062	J	BLM21P221SG	AE
IC5	RH-iXA348WJZZ	J	IC (PG-M20S)		L8	9DK001-81062	J	BLM21P221SG	AE
IC6	9DK001-15118	J	PST9229	AL	L11	9DK001-81052	J	NLC322522T-3R3M 3.3µH	AG
IC7	RH-iXA147WJZZQ	J	HD6417709SBP133V	BK	L12	9DK001-81052	J	NLC322522T-3R3M 3.3µH	AG
IC8	9DK001-15112	J	PQ033EZ01	AM	L13	9DK001-81062	J	BLM21P221SG	AE
IC10	9DK001-15117	J	PST9222	AK	L14	9DK001-81052	J	NLC322522T-3R3M 3.3µH	AG
IC11	9DK001-11023	J	24LC21A7SN	AS	L15	9DK001-81062	J	BLM21P221SG	AE
IC13	9DK001-15113	J	AD9888	BT	L20	9DK001-81044	J	BLM21B201S	AE
IC15	9DK001-15119	J	SAA7118E	BM	L21	9DK001-81044	J	BLM21B201S	AE
IC25	RH-iXA091WJZZQ	J	CVIC2	BX	L22	9DK001-81052	J	NLC322522T-3R3M 3.3µH	AG
IC28	9KD001-11028	J	HY57V641620HGT-H	AY	FL1	9DK001-82021	J	BMS100	AH
IC29	RH-iX3399CEN1Q	J	IX3399	BM	FL2	9DK001-82021	J	BMS100	AH
IC30	9DK001-11028	J	HY57V641620HGT-H	AY	FL3	9DK001-81020	J	BMK351	AG
IC319	9DK001-11024	J	HY57V653220BTC-7	BN	FL41	9DK001-81020	J	BMK351	AG
IC320	9DK001-11024	J	HY57V653220BTC-7	BN	FL94	9DK001-81020	J	BMK351	AG
IC321	9DK001-11024	J	HY57V653220BTC-7	BN	FL98	9DK001-82021	J	BMS100	AH
IC322	9DK001-11024	J	HY57V653220BTC-7	BN	FL99	9DK001-82021	J	BMS100	AH
IC330	9DK001-15089	J	TL712CPW	AR	FL103	9DK001-81020	J	BMK351	AG
IC331	9DK001-15089	J	TL712CPW	AR	FL107	9DK001-82021	J	BMS100	AH
IC298	9DK001-15090	J	SiL151A	BP	FL108	9DK001-82021	J	BMS100	AH
IC363	9DK001-12107	J	74VHC153MTC	AK	FL109	9DK001-82021	J	BMS100	AH
IC364	9DK001-15114	J	PQ070XZ01	AN	FL110	9DK001-82021	J	BMS100	AH
IC365	9DK001-12103	J	74LCX157MTC	AK	FL111	9DK001-82028	J	NFA31GD1004704	AM
IC366	9DK001-12105	J	74LVX125MTC	AK	FL112	9DK001-82028	J	NFA31GD1004704	AM
<i>Note: When exchanging the following parts, it becomes unit replacement correspondence.</i>									
IC7, IC15, IC25, IC29									
TRANSISTORS									
Q1	9DK001-20012	J	2SA1037AKQ	AE	C3	9DK001-42157	J	0.1 25V	Ceramic
Q2	9DK001-20012	J	2SA1037AKQ	AE	C4	9DK001-42099	J	100p 50V	Ceramic
Q3	9DK001-20012	J	2SA1037AKQ	AE	C5	9DK001-42105	J	0.047 50V	Ceramic
Q4	9DK001-20037	J	HNC01FU	AG	C6	9DK001-42115	J	10p 50V	Ceramic
Q5	9DK001-20012	J	2SA1037AKQ	AE	C7	9DK001-42156	J	1 6.3V	Ceramic
DIODES									
D5	9DK001-30018	J	1SS187	AD	C8	9DK001-42157	J	0.1 25V	Ceramic
D9	9DK001-30018	J	1SS187	AD	C9	9DK001-42157	J	0.1 25V	Ceramic
D28	9DK001-30018	J	1SS187	AD	C10	9DK001-42131	J	10 10V	Ceramic
D29	9DK001-30018	J	1SS187	AD	C12	9DK001-42103	J	15p 50V	Ceramic
D30	9DK001-30015	J	MA157A	AE	C13	9DK001-42103	J	15p 50V	Ceramic
D31	9DK001-30015	J	MA157A	AE	C14	9DK001-42156	J	1 6.3V	Ceramic
D33	9DK001-30018	J	1SS187	AD	C15	9DK001-42131	J	10 10V	Ceramic
D34	9DK001-30018	J	1SS187	AD	C16	9DK001-42157	J	0.1 25V	Ceramic
D35	9DK001-30018	J	1SS187	AD	C17	9DK001-42156	J	1 6.3V	Ceramic
D36	9DK001-30015	J	MA157A	AE	C18	9DK001-42128	J	1000p Ceramic	AC
D37	9DK001-30015	J	MA157A	AE	C19	9DK001-42104	J	470p 50V	Ceramic
D38	9DK001-30015	J	MA157A	AE	C20	9DK001-42104	J	470p 50V	Ceramic
D39	9DK001-30015	J	MA157A	AE	C21	9DK001-40081	J	22 6.3V	Electrolytic
D40	9DK001-30015	J	MA157A	AE	C22	9DK001-42156	J	1 6.3V	Ceramic
D41	9DK001-30015	J	MA157A	AE	C23	9DK001-42156	J	1 6.3V	Ceramic
D43	9DK001-30015	J	MA157A	AE	C24	9DK001-42157	J	0.1 25V	Ceramic
D44	9DK001-30015	J	MA157A	AE	C25	9DK001-42131	J	10 10V	Electrolytic
D45	9DK001-30015	J	MA157A	AE	C26	9DK001-42157	J	0.1 25V	Ceramic
D46	9DK001-30015	J	MA157A	AE	C27	9DK001-42105	J	0.047 50V	Ceramic
D47	9DK001-30015	J	MA157A	AE	C28	9DK001-42105	J	0.047 50V	Ceramic
PACKAGED CIRCUITS									
X1	9DK001-80038	J	CX-53F(16.588MHz)	AN	C29	9DK001-42105	J	0.047 50V	Ceramic
X4	9DK001-80018	J	FXO-31FL(25.000MHz)	AV	C30	9DK001-42157	J	0.1 25V	Ceramic
X5	9DK001-80024	J	FXO-31FL(32.500MHz)	AT	C31	9DK001-42156	J	1 6.3V	Ceramic
X6	9DK001-80034	J	CX-53F(24.576MHz)	AN	C33	9DK001-42156	J	1 6.3V	Ceramic
X7	9DK001-80015	J	MC-206(32.768kHz)	AS	C35	9DK001-40089	J	47 6.3V	Electrolytic
RMC1	9DK001-15121	J	TSOP1838SS3V	AM	C36	9DK001-42131	J	10 10V	Ceramic
COILS AND FILTERS									
L3	9DK001-81059	J	NLC322522T-1R0M 1.0µH	AE	C37	9DK001-42113	J	4.7 10V	Ceramic
L4	9DK001-81052	J	NLC322522T-3R3M 3.3µH	AG	C38	9DK001-42105	J	0.047 50V	Ceramic
					C39	9DK001-40089	J	47 6.3V	Electrolytic
					C40	9DK001-42105	J	0.047 50V	Ceramic
					C41	9DK001-42105	J	0.047 50V	Ceramic
					C42	9DK001-40091	J	100 4V	Electrolytic
					C43	9DK001-42105	J	0.047 50V	Ceramic
					C44	9DK001-42105	J	0.047 50V	Ceramic
					C45	9DK001-42105	J	0.047 50V	Ceramic
					C46	9DK001-42103	J	15p 50V	Ceramic

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
CPCi-0057CE01 (PG-M20X)									
CPCi-0057CE31 (PG-M20S)									
PC I/F UNIT (Continued)									
C47	9DK001-42103	J 15p	50V Ceramic	AC	C441	9DK001-40081	J 22	6.3V Electrolytic	AF
C48	9DK001-40081	J 22	6.3V Electrolytic	AF	C442	9DK001-42156	J 1	6.3V Ceramic	AC
C49	9DK001-42157	J 0.1	25V Ceramic	AC	C444	9DK001-42099	J 100p	50V Ceramic	AC
C50	9DK001-40081	J 22	6.3V Electrolytic	AF	C447	9DK001-42131	J 10	10V Ceramic	AE
C51	9DK001-42156	J 1	6.3V Ceramic	AC	C448	9DK001-42122	J 180p	50V Ceramic	AC
C52	9DK001-42157	J 0.1	25V Ceramic	AC	C449	9DK001-42122	J 180p	50V Ceramic	AC
C53	9DK001-42157	J 0.1	25V Ceramic	AC	C450	9DK001-42122	J 180p	50V Ceramic	AC
C54	9DK001-42157	J 0.1	25V Ceramic	AC	C454	9DK001-42131	J 10	10V Ceramic	AE
C55	9DK001-42157	J 0.1	25V Ceramic	AC	C457	9DK001-42123	J 330p	50V Ceramic	AC
C56	9DK001-42157	J 0.1	25V Ceramic	AC	C458	9DK001-42123	J 330p	50V Ceramic	AC
C57	9DK001-40109	J 150	4V Electrolytic	AC	C459	9DK001-42123	J 330p	50V Ceramic	AC
C58	9DK001-42105	J 0.047	50V Ceramic	AC	C465	9DK001-42123	J 330p	50V Ceramic	AC
C59	9DK001-42105	J 0.047	50V Ceramic	AC	C468	9DK001-42123	J 330p	50V Ceramic	AC
C60	9DK001-42157	J 0.1	25V Ceramic	AC	C569	9DK001-42157	J 0.1	25V Ceramic	AC
C61	9DK001-42156	J 1	6.3V Ceramic	AC	C571	9DK001-40076	J 4.7	35V Electrolytic	AF
C62	9DK001-42105	J 0.047	50V Ceramic	AC	C575	9DK001-42157	J 0.1	25V Ceramic	AC
C63	9DK001-42157	J 0.1	25V Ceramic	AC	C576	9DK001-42156	J 1	6.3V Ceramic	AC
C64	9DK001-42157	J 0.1	25V Ceramic	AC	C577	9DK001-42156	J 1	6.3V Ceramic	AC
C65	9DK001-42157	J 0.1	25V Ceramic	AC	C578	9DK001-42156	J 1	6.3V Ceramic	AC
C66	9DK001-40091	J 100	4V Electrolytic	AF	C579	9DK001-42156	J 1	6.3V Ceramic	AC
C69	9DK001-42096	J 0.01	50V Ceramic	AC	C580	9DK001-42157	J 0.1	25V Ceramic	AC
C70	9DK001-42105	J 0.047	50V Ceramic	AC	C581	9DK001-42156	J 1	6.3V Ceramic	AC
C71	9DK001-42096	J 0.01	50V Ceramic	AC	C582	9DK001-42156	J 1	6.3V Ceramic	AC
C72	9DK001-42157	J 0.1	25V Ceramic	AC	C583	9DK001-42156	J 1	6.3V Ceramic	AC
C73	9DK001-42157	J 0.1	25V Ceramic	AC	C584	9DK001-42157	J 0.1	25V Ceramic	AC
C74	9DK001-42157	J 0.1	25V Ceramic	AC	C585	9DK001-42157	J 0.1	25V Ceramic	AC
C75	9DK001-42157	J 0.1	25V Ceramic	AC	C586	9DK001-42156	J 1	6.3V Ceramic	AC
C76	9DK001-42157	J 0.1	25V Ceramic	AC	C589	9DK001-42156	J 1	6.3V Ceramic	AC
C77	9DK001-42157	J 0.1	25V Ceramic	AC	C590	9DK001-42156	J 1	6.3V Ceramic	AC
C78	9DK001-42105	J 0.047	50V Ceramic	AC	C591	9DK001-42156	J 1	6.3V Ceramic	AC
C81	9DK001-42105	J 0.047	50V Ceramic	AC	C592	9DK001-42156	J 1	6.3V Ceramic	AC
C82	9DK001-42154	J 0.33	10V Ceramic	AB	C593	9DK001-42156	J 1	6.3V Ceramic	AC
C83	9DK001-40081	J 22	6.3V Electrolytic	AF	C594	9DK001-42157	J 0.1	25V Ceramic	AC
C85	9DK001-42157	J 0.1	25V Ceramic	AC	C595	9DK001-42157	J 0.1	25V Ceramic	AC
C140	9DK001-42105	J 0.047	50V Ceramic	AC	C596	9DK001-42156	J 1	6.3V Ceramic	AC
C141	9DK001-42105	J 0.047	50V Ceramic	AC	C597	9DK001-42157	J 0.1	25V Ceramic	AC
C142	9DK001-42105	J 0.047	50V Ceramic	AC	C598	9DK001-42156	J 1	6.3V Ceramic	AC
C150	9DK001-42157	J 0.1	25V Ceramic	AC	C599	9DK001-42156	J 1	6.3V Ceramic	AC
C151	9DK001-42157	J 0.1	25V Ceramic	AC	C600	9DK001-42157	J 0.1	25V Ceramic	AC
C152	9DK001-42157	J 0.1	25V Ceramic	AC	C601	9DK001-42157	J 0.1	25V Ceramic	AC
C153	9DK001-42157	J 0.1	25V Ceramic	AC	C602	9DK001-40091	J 100	4V Electrolytic	AF
C154	9DK001-42157	J 0.1	25V Ceramic	AC	C603	9DK001-42157	J 0.1	25V Ceramic	AC
C155	9DK001-42157	J 0.1	25V Ceramic	AC	C607	9DK001-42157	J 0.1	25V Ceramic	AC
C156	9DK001-42157	J 0.1	25V Ceramic	AC	C609	9DK001-42157	J 0.1	25V Ceramic	AC
C157	9DK001-42157	J 0.1	25V Ceramic	AC	C611	9DK001-42157	J 0.1	25V Ceramic	AC
C158	9DK001-42157	J 0.1	25V Ceramic	AC	C613	9DK001-42157	J 0.1	25V Ceramic	AC
C159	9DK001-42157	J 0.1	25V Ceramic	AC	C615	9DK001-42157	J 0.1	25V Ceramic	AC
C160	9DK001-42157	J 0.1	25V Ceramic	AC	C617	9DK001-42157	J 0.1	25V Ceramic	AC
C161	9DK001-42157	J 0.1	25V Ceramic	AC	C619	9DK001-42157	J 0.1	25V Ceramic	AC
C162	9DK001-42157	J 0.1	25V Ceramic	AC	C621	9DK001-42157	J 0.1	25V Ceramic	AC
C163	9DK001-42157	J 0.1	25V Ceramic	AC	C623	9DK001-42157	J 0.1	25V Ceramic	AC
C164	9DK001-42157	J 0.1	25V Ceramic	AC	C625	9DK001-42157	J 0.1	25V Ceramic	AC
C165	9DK001-42157	J 0.1	25V Ceramic	AC	C627	9DK001-42157	J 0.1	25V Ceramic	AC
C166	9DK001-42158	J 3900p	16V Film	AL	C629	9DK001-42157	J 0.1	25V Ceramic	AC
C167	9DK001-42155	J 0.039	16V Film	AL	C631	9DK001-42157	J 0.1	25V Ceramic	AC
C169	9DK001-42157	J 0.1	25V Ceramic	AC	C633	9DK001-42157	J 0.1	25V Ceramic	AC
C170	9DK001-42157	J 0.1	25V Ceramic	AC	C635	9DK001-42157	J 0.1	25V Ceramic	AC
C171	9DK001-42157	J 0.1	25V Ceramic	AC	C637	9DK001-42157	J 0.1	25V Ceramic	AC
C174	9DK001-42157	J 0.1	25V Ceramic	AC	C638	9DK001-42157	J 0.1	25V Ceramic	AC
C176	9DK001-42157	J 0.1	25V Ceramic	AC	C640	9DK001-42157	J 0.1	25V Ceramic	AC
C177	9DK001-42157	J 0.1	25V Ceramic	AC	C641	9DK001-42157	J 0.1	25V Ceramic	AC
C192	9DK001-42157	J 0.1	25V Ceramic	AC	C648	9DK001-42157	J 0.1	25V Ceramic	AC
C197	9DK001-42157	J 0.1	25V Ceramic	AC	C649	9DK001-42157	J 0.1	25V Ceramic	AC
C205	9DK001-42157	J 0.1	25V Ceramic	AC	C656	9DK001-42157	J 0.1	25V Ceramic	AC
C214	9DK001-42157	J 0.1	25V Ceramic	AC	C658	9DK001-42157	J 0.1	25V Ceramic	AC
C218	9DK001-42157	J 0.1	25V Ceramic	AC	C662	9DK001-42157	J 0.1	25V Ceramic	AC
C366	9DK001-40091	J 100	4V Electrolytic	AF	C666	9DK001-42096	J 0.01	50V Ceramic	AC
C375	9DK001-40091	J 100	4V Electrolytic	AF	C668	9DK001-42157	J 0.1	25V Ceramic	AC
C437	9DK001-42099	J 100p	50V Ceramic	AC	C670	9DK001-42157	J 0.1	25V Ceramic	AC
C438	9DK001-42099	J 100p	50V Ceramic	AC	C672	9DK001-42157	J 0.1	25V Ceramic	AC
C439	9DK001-42099	J 100p	50V Ceramic	AC	C678	9DK001-42157	J 0.1	25V Ceramic	AC
C440	9DK001-42099	J 100p	50V Ceramic	AC	C682	9DK001-42157	J 0.1	25V Ceramic	AC
					C685	9DK001-42157	J 0.1	25V Ceramic	AC
					C686	9DK001-42157	J 0.1	25V Ceramic	AC
					C687	9DK001-42157	J 0.1	25V Ceramic	AC
					C688	9DK001-42157	J 0.1	25V Ceramic	AC

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
CPCi-0057CE01 (PG-M20X)									
CPCi-0057CE31 (PG-M20S)									
PC I/F UNIT (Continued)									
C689	9DK001-42157	J 0.1	25V Ceramic	AC	R46	9DK001-50275	J 6.8	1/16W Chip1608	AB
C695	9DK001-42115	J 10p	50V Ceramic	AC	R47	9DK001-50159	J 22	1/16W Chip1608	AA
C696	9DK001-42115	J 10p	50V Ceramic	AC	R48	9DK001-50044	J 68	1/10W Chip2125	AB
C697	9DK001-42157	J 0.1	25V Ceramic	AC	R50	9DK001-50149	J 0	1/16W Chip	AB
C708	9DK001-40090	J 47	4V Electrolytic	AF	R51	9DK001-50149	J 0	1/16W Chip	AB
C744	9DK001-42157	J 0.1	25V Ceramic	AC	R54	9DK001-50149	J 0	1/16W Chip	AB
C745	9DK001-42157	J 0.1	25V Ceramic	AC	R63	9DK001-50236	J 910	1/16W Chip1608	AB
C746	9DK001-42112	J 33p	50V Ceramic	AB	R64	9DK001-50213	J 2.0k	1/16W Chip1608	AB
C747	9DK001-42157	J 0.1	25V Ceramic	AC	R65	9DK001-50181	J 3.3k	1/16W Chip1608	AA
C748	9DK001-42157	J 0.1	25V Ceramic	AC	R66	9DK001-50181	J 3.3k	1/16W Chip1608	AA
C749	9DK001-42112	J 33p	50V Ceramic	AB	R67	9DK001-51037	J 6.8k	1/16W Chip	AD
C750	9DK001-42157	J 0.1	25V Ceramic	AC	R69	9DK001-50149	J 0	1/16W Chip	AB
C752	9DK001-42113	J 4.7	10V Ceramic	AB	R70	9DK001-50119	J 150	1/10W Chip2125	AB
C758	9DK001-42115	J 10p	50V Ceramic	AC	R71	9DK001-50119	J 150	1/10W Chip2125	AB
C759	9DK001-42157	J 0.1	25V Ceramic	AC	R72	9DK001-50119	J 150	1/10W Chip2125	AA
C901	9DK001-42157	J 0.1	25V Ceramic	AC	R73	9DK001-50185	J 10k	1/16W Chip1608	AA
C902	9DK001-42156	J 1	6.3V Ceramic	AC	R74	9DK001-50185	J 10k	1/16W Chip1608	AA
C904	9DK001-42157	J 0.1	25V Ceramic	AC	R75	9DK001-50159	J 22	1/16W Chip1608	AA
C905	9DK001-42157	J 0.1	25V Ceramic	AC	R80	9DK001-50044	J 68	1/10W Chip2125	AB
C906	9DK001-42157	J 0.1	25V Ceramic	AC	R83	9DK001-50159	J 22	1/16W Chip1608	AA
C909	9DK001-42156	J 1	6.3V Ceramic	AC	R88	9DK001-50044	J 68	1/10W Chip2125	AB
C910	9DK001-42157	J 0.1	25V Ceramic	AC	R89	9DK001-50149	J 0	1/16W Chip	AB
C911	9DK001-42156	J 1	6.3V Ceramic	AC	R91	9DK001-50159	J 22	1/16W Chip1608	AA
C912	9DK001-42156	J 1	6.3V Ceramic	AC	R93	9DK001-50300	J 18	1/10W Chip2125	AA
C913	9DK001-42156	J 1	6.3V Ceramic	AC	R96	9DK001-50044	J 68	1/10W Chip2125	AB
C914	9DK001-42156	J 1	6.3V Ceramic	AC	R97	9DK001-50185	J 10k	1/16W Chip1608	AA
C915	9DK001-42157	J 0.1	25V Ceramic	AC	R104	9DK001-50149	J 0	1/16W Chip	AB
C916	9DK001-42115	J 10p	50V Ceramic	AC	R105	9DK001-50149	J 0	1/16W Chip	AB
C917	9DK001-42156	J 1	6.3VC eramic	AC	R106	9DK001-50149	J 0	1/16W Chip	AB
C918	9DK001-42157	J 0.1	25V Ceramic	AC	R107	9DK001-50149	J 0	1/16W Chip	AB
C919	9DK001-40109	J 150	4V Electrolytic		R109	9DK001-51037	J 6.8k	1/16W Chip	AD
C920	9DK001-42115	J 10p	50V Ceramic	AC	R110	9DK001-51037	J 6.8k	1/16W Chip	AD
C921	9DK001-40091	J 100	4V Electrolytic	AF	R111	9DK001-50149	J 0	1/16W Chip	AB
C922	9DK001-42154	J 0.33	10V Ceramic	AB	R113	9DK001-50149	J 0	1/16W Chip	AB
C923	9DK001-42157	J 0.1	25V Ceramic	AC	R114	9DK001-50297	J 39	1/16W Chip1608	AA
C924	9DK001-42157	J 0.1	25V Ceramic	AC	R116	9DK001-50300	J 18	1/10W Chip2125	AA
C925	9DK001-42131	J 10	10V Ceramic	AE	R117	9DK001-50298	J 120	1/4W Chip3216	AB
RESISTORS									
R1	9DK001-51030	J 10k	1/16W	AD	R118	9DK001-50149	J 0	1/16W Chip	AB
R2	9DK001-50149	J 0	1/16W Chip	AB	R119	9DK001-50149	J 0	1/16W Chip	AB
R3	9DK001-50179	J 2.2k	1/16W Chip1608	AA	R121	9DK001-50292	J 3.9	1/4W Chip3216	AA
R4	9DK001-50149	J 0	1/16W Chip	AB	R122	9DK001-50292	J 3.9	1/4W Chip3216	AA
R8	9DK001-51030	J 10k	1/16W	AD	R123	9DK001-50149	J 0	1/16W Chip	AB
R9	9DK001-50219	J 47k	1/16W Chip1608	AA	R124	9DK001-50149	J 0	1/16W Chip	AB
R11	9DK001-51045	J 100	1/16W Chip	AA	R127	9DK001-50149	J 0	1/16W Chip	AB
R12	9DK001-50185	J 10k	1/16W Chip1608	AA	R130	9DK001-50173	J 470	1/16W Chip1608	AA
R13	9DK001-50165	J 100	1/16W Chip1608	AA	R131	9DK001-50159	J 22	1/16W Chip1608	AA
R14	9DK001-50074	J 100	1/4W Chip3216	AA	R134	9DK001-50149	J 0	1/16W Chip	AB
R17	9DK001-50183	J 4.7k	1/16W Chip1608	AA	R138	9DK001-50177	J 1k	1/16W Chip1608	AA
R18	9DK001-50177	J 1k	1/16W Chip1608	AB	R139	9DK001-50177	J 1k	1/16W Chip1608	AA
R19	9DK001-50149	J 0	1/16W Chip	AD	R140	9DK001-50177	J 1k	1/16W Chip1608	AA
R22	9DK001-51030	J 10k	1/16W	AB	R143	9DK001-50177	J 1k	1/16W Chip1608	AA
R23	9DK001-50149	J 0	1/16W Chip	AD	R150	9DK001-51046	J 1k	1/16W Chip	AA
R25	9DK001-51030	J 10k	1/16W	AD	R151	9DK001-50302	J 560	1/16W Chip1608	AA
R26	9DK001-51037	J 6.8k	1/16W Chip	AD	R152	9DK001-42105	J 0.047	50V Ceramic	AC
R27	9DK001-51030	J 10k	1/16W	AB	R153	9DK001-42105	J 0.047	50V Ceramic	AC
R28	9DK001-50149	J 0	1/16W Chip	AB	R155	9DK001-42105	J 0.047	50V Ceramic	AC
R29	9DK001-50275	J 6.8	1/16W Chip1608	AA	R156	9DK001-42105	J 0.047	50V Ceramic	AC
R32	9DK001-50150	J 10	1/16W Chip1608	AA	R158	9DK001-42105	J 0.047	50V Ceramic	AC
R33	9DK001-50161	J 47	1/16W Chip1608	AA	R159	9DK001-42105	J 0.047	50V Ceramic	AC
R34	9DK001-50185	J 10k	1/16W Chip1608	AA	R160	9DK001-42105	J 0.047	50V Ceramic	AC
R35	9DK001-50185	J 10k	1/16W Chip1608	AA	R161	9DK001-50201	J 18	1/16W Chip1608	AA
R36	9DK001-50177	J 1k	1/16W Chip1608	AA	R162	9DK001-50183	J 4.7k	1/16W Chip1608	AA
R37	9DK001-50159	J 22	1/16W Chip1608	AA	R165	9DK001-50181	J 3.3k	1/16W Chip1608	AA
R38	9DK001-50150	J 10	1/16W Chip1608	AA	R166	9DK001-50149	J 0	1/16W Chip	AB
R39	9DK001-50150	J 10	1/16W Chip1608	AA	R170	9DK001-50150	J 10	1/16W Chip1608	AA
R40	9DK001-50044	J 68	1/10W Chip2125	AB	R172	9DK001-50185	J 10k	1/16W Chip1608	AA
R41	9DK001-50275	J 6.8	1/16W Chip1608	AB	R174	9DK001-50149	J 0	1/16W Chip	AB
R42	9DK001-50159	J 22	1/16W Chip1608	AA	R176	9DK001-50224	J 150	1/4W Chip3216	AB
R45	9DK001-50044	J 68	1/10W Chip2125	AB	R178	9DK001-50185	J 10k	1/16W Chip1608	AA
					R180	9DK001-50149	J 0	1/16W Chip	AB
					R191	9DK001-50150	J 10	1/16W Chip1608	AA
					R192	9DK001-50150	J 10	1/16W Chip1608	AA
					R193	9DK001-50150	J 10	1/16W Chip1608	AA
					R194	9DK001-50149	J 0	1/16W Chip	AB
					R196	9DK001-50149	J 0	1/16W Chip	AB
					R199	9DK001-51037	J 6.8k	1/16W Chip	AD

Ref. No.	Part No.	★	Description	Code
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**CPCI-0057CE01 (PG-M20X)
CPCI-0057CE31 (PG-M20S)
PC I/F UNIT (Continued)**

R201	9DK001-50149	J 0	1/16W Chip	AB
R648	9DK001-50165	J 100	1/16W Chip1608	AA
R649	9DK001-50165	J 100	1/16W Chip1608	AA
R654	9DK001-50204	J 150	1/16W Chip1608	AA
R685	9DK001-50150	J 10	1/16W Chip1608	AA
R688	9DK001-50201	J 15	1/16W Chip1608	AA
R689	9DK001-50173	J 470	1/16W Chip1608	AA
R690	9DK001-50205	J 1.8k	1/16W Chip1608	AA
R692	9DK001-50159	J 22	1/16W Chip1608	AA
R693	9DK001-50159	J 22	1/16W Chip1608	AA
R694	9DK001-50159	J 22	1/16W Chip1608	AA
R695	9DK001-50159	J 22	1/16W Chip1608	AA
R696	9DK001-50185	J 10k	1/16W Chip1608	AA
R697	9DK001-50185	J 10k	1/16W Chip1608	AA
R698	9DK001-50185	J 10k	1/16W Chip1608	AA
R699	9DK001-50185	J 10k	1/16W Chip1608	AA
R700	9DK001-50218	J 20k	1/16W Chip1608	AA
R701	9DK001-50257	J 75	1/16W Chip1608	AA
R704	9DK001-50185	J 10k	1/16W Chip1608	AA
R750	9DK001-50177	J 1k	1/16W Chip1608	AA
R751	9DK001-50177	J 1k	1/16W Chip1608	AA
R752	9DK001-50170	J 270	1/16W Chip1608	AA
R753	9DK001-50170	J 270	1/16W Chip1608	AA
R787	9DK001-50244	J 3.9k	1/16W Chip1608	AA
R788	9DK001-50177	J 1k	1/16W Chip1608	AA
R789	9DK001-50177	J 1k	1/16W Chip1608	AA
R790	9DK001-50179	J 2.2k	1/16W Chip1608	AA
R791	9DK001-50244	J 3.9k	1/16W Chip1608	AA
R792	9DK001-50179	J 2.2k	1/16W Chip1608	AA
R801	9DK001-50205	J 1.8k	1/16W Chip1608	AA
R867	9DK001-50275	J 6.8	1/16W Chip1608	AB
R868	9DK001-50275	J 6.8	1/16W Chip1608	AB
R869	9DK001-50275	J 6.8	1/16W Chip1608	AB
R977	9DK001-50150	J 10	1/16W Chip1608	AA
R994	9DK001-50236	J 910	1/16W Chip1608	AB
R995	9DK001-50199	J 2.15k	1/16W Chip1608	AB
R998	9DK001-50177	J 1k	1/16W Chip1608	AA
R999	9DK001-50303	J 39	1/10W Chip2125	AA
RE1	9DK001-94001	J	FTR-B3 GA 003Z-B10	AV
RE2	9DK001-94001	J	FTR-B3 GA 003Z-B10	AV

MISCELLANEOUS PARTS

P1	9DK001-60053	J 74320-1004	AZ
P8	9DK001-60077	J FX8C-80P-SV4	AT
P9	9DK001-60075	J FX6-40P-0.8SV	AP
SC1	9DK001-60076	J FH16-80S-0.3SHW	AV
	PSLDCA002WJZZ	J Shield	AN

CABINET AND MECHANICAL PARTS/ GEHÄUSE UND MACHANISCHE BAUTEILE

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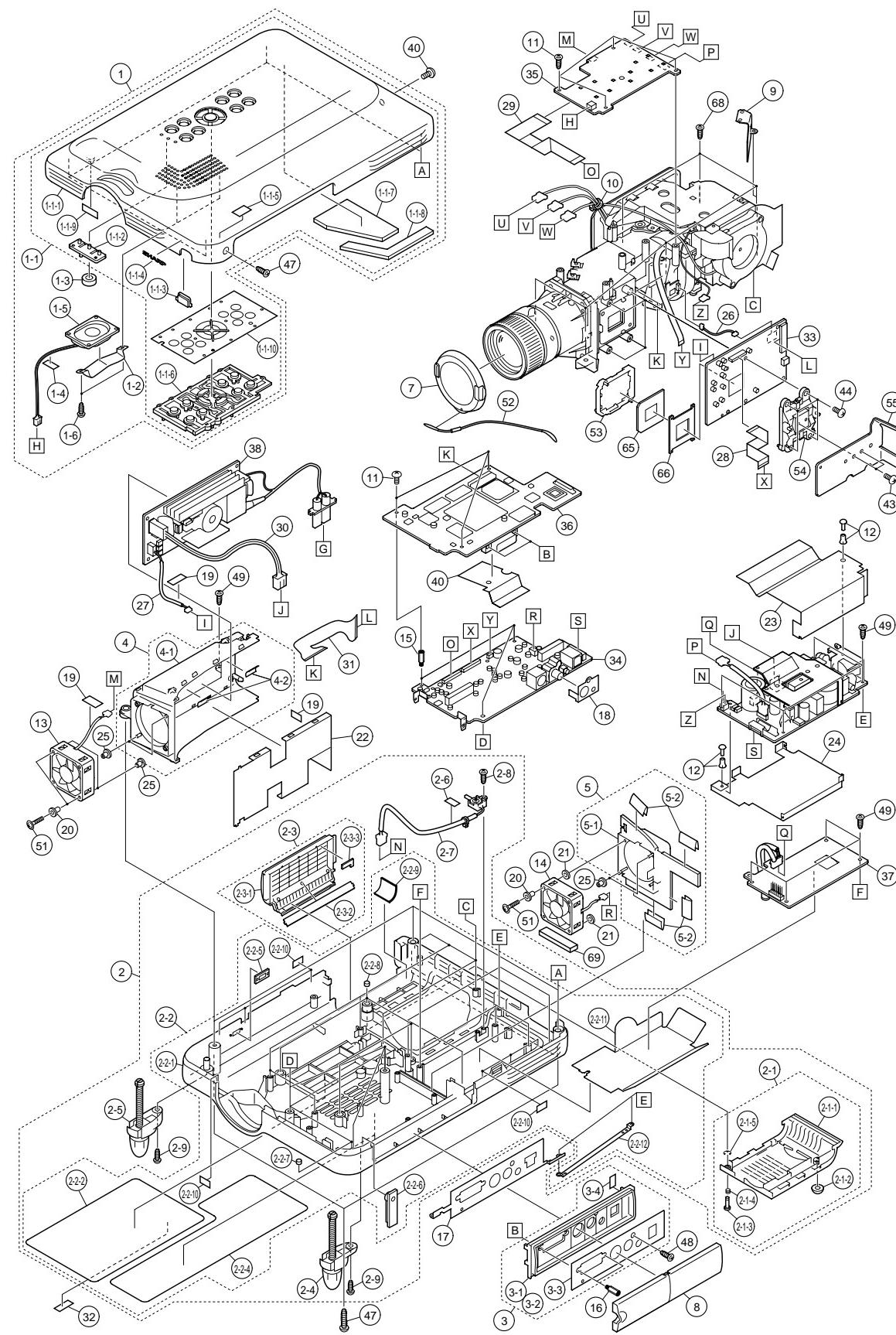
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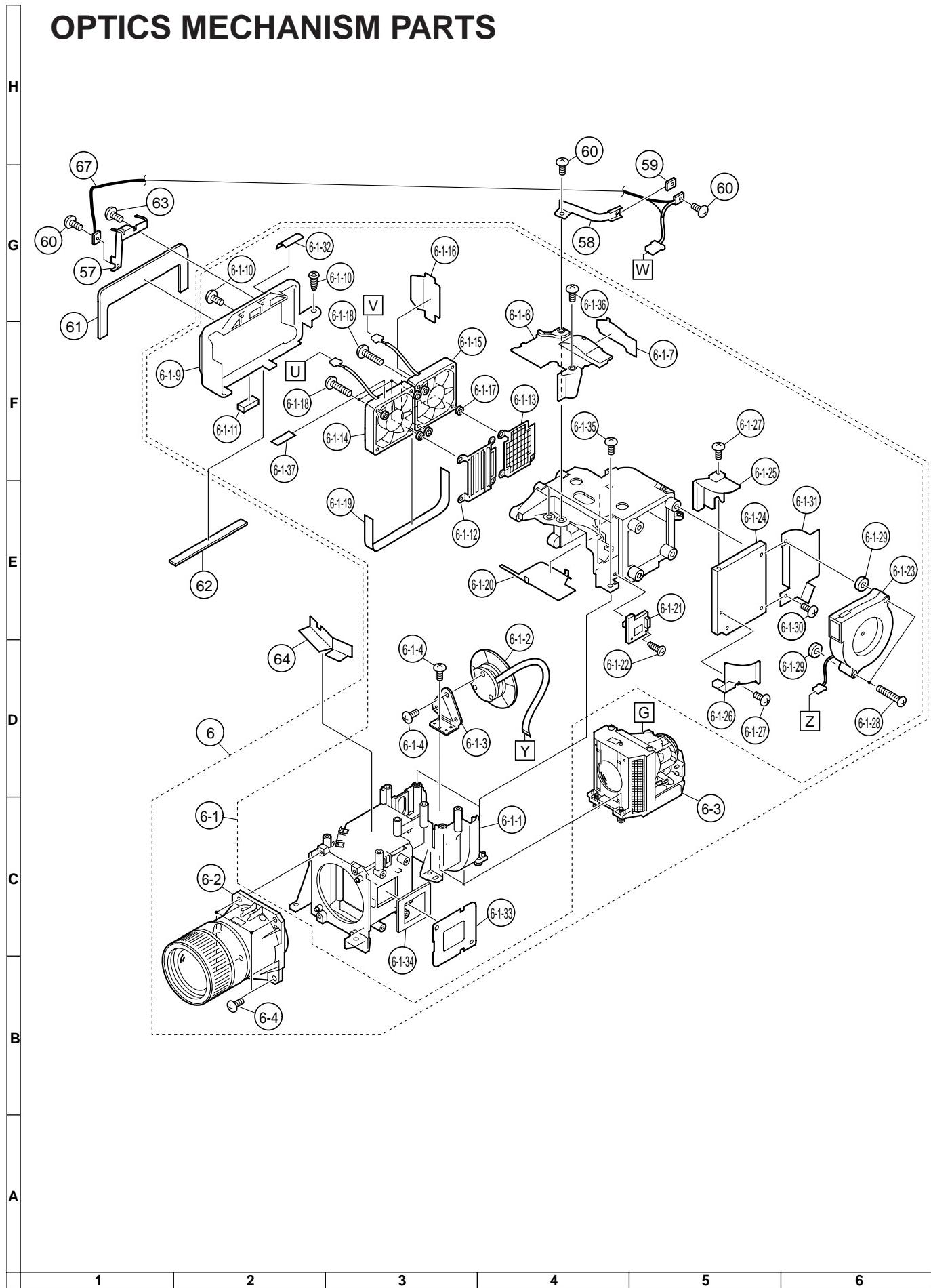
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Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
CABINET AND MECHANICAL PARTS									
1	Not Available	—	Top Body Unit	—	6	Refer to Optical Mechanism Parts			
1-1	DBDYT1210CE01	J	Top Body Ass'y (PG-M20X)	BL	7	CCAPHA001WJ01	J	Lens Cap	AH
1-1	DBDYTA004WJ01	J	Top Body Ass'y (PG-M20S)	—	8	GCOVD0103CESA	J	Terminal Cover	AK
1-1-1	Not Available	—	Top Body	—	9	LANGHA001WJFW	J	Cover Angle	AF
1-1-2	Not Available	—	LED Cover	—	10	LHLDW0106CEZZ	J	Wire Holder	AF
1-1-3	Not Available	—	RC Cover	—	11	LX-BZ3248CEFD	J	Screw, x5	AA
1-1-4	Not Available	—	Badge, "SHARP"	—	12	LX-LZ1011GE00	J	Clip Screw, x2	AC
1-1-5	HiNDPA057WJSA	J	IQ Label	—	13	NFANR0129CEZZ	J	Cooling Fan	AU
1-1-6	Not Available	—	Operation Button	—	14	NFANR0130CEZZ	J	Cooling Fan	AU
1-1-7	PSLDHA006WJK0	J	Heat Shield	AG	15	NSFTZ0170CEFW	J	Hexagon Screw, x3	AD
1-1-8	PSLDHA007WJK0	J	Heat Shielding Sheet	AM	16	NSFTZ0183CEFW	J	Hexagon Screw, x2	AD
1-1-9	PSPAZA025WJZZ	J	Tape	AB	17	PSLDM4719CEFW	J	Terminal Shield	AF
1-1-10	QEARPA021WJFW	J	Earth Angle	AE	18	QEARPA033WJFW	J	Earth Angle	AD
1-2	LANGS0127CEFW	J	Speaker Fixing Angle	AF	19	PSPAT0013CEZZ	J	Tape, x14	AC
1-3	PMLT-A006WJZZ	J	Spacer	AB	20	PSPAZA034WJZZ	J	Spacer for Fan, x7	AD
1-4	PSPAT0013CEZZ	J	Spacer	AC	21	PSPAZA035WJZZ	J	Spacer for Fan, x4	AB
1-5	RSP-ZA004WJN1	J	Speaker	AQ	22	PZETK0143CEKZ	J	Ballast Unit Cover	AL
1-6	XEPSD26P06000	J	Screw, x2	AA	23	PZETK0144CEKZ	J	Cover(Top)	AM
2	CBDYU1143CE01	J	Bottom Body Unit (PG-M20X)	BQ	24	PZETK0145CEKZ	J	Cover(Bottom)	AL
2	CBDYU1143CE03	J	Bottom Body Unit (PG-M20S)	—	25	PSPAGA036WJZZ	J	Spacer for Fan, x4	AE
2-1	Not Available	—	Lamp Door Unit	—	26	QCNW-A074WJZZ	J	Connecting Cord(CW)	AD
2-1-1	DDORU1019CE01	J	Lamp Door Ass'y	BQ	27	QCNW-A075WJZZ	J	Connecting Cord(BA)	AF
2-1-2	GLEGP913CESA	J	Leg(Rear)	AD	28	QCNW-A076WJZZ	J	Connecting Cord(FB)	AD
2-1-3	LX-BZ3449CEFF	J	Screw, x1	AC	29	QCNW-A078WJZZ	J	Connecting Cord(KY)	AE
2-1-4	MSPRC0215CEFW	J	Spring	AC	30	QCNW-A515WJZZ	J	Connecting Cord(DE)	AP
2-1-5	XREUW20-04000	J	E-Ring	AA	31	QPWBHA073WJZZ	J	Connecting Cord	AE
2-2	DBDYU1143CE01	J	Bottom Body Ass'y (PG-M20X)	BM	32	TLABN0433CEZZ	J	Serial No. Label (PG-M20XU)	AE
2-2	DBDYU1143CE03	J	Bottom Body Ass'y (PG-M20S)	—	32	TLABN0458CEZZ	J	Serial No. Label (PG-M20XE)	AE
2-2-1	Not Available	—	Bottom Body	—	32	TLABNA002WJZZ	J	Serial No. Label (PG-M20XX)	AF
2-2-2	HiNDP5957CEZZ	J	Model Label (PG-M20X)	AK	32	TLABNA090WJZZ	J	Serial No. Labe (PG-M20SU)	—
2-2-2	HiNDPA113WJZZ	J	Model Label (PG-M20S)	—	32	TLABNA091WJZZ	J	Serial No. Labe (PG-M20SE)	—
2-2-3	HiNDP5958CEZZ	J	Caution Label	AL	32	TLABNA092WJZZ	J	Serial No. Labe (PG-M20SK)	—
2-2-4	HiNDPA050WJSA	J	Heat Caution Label (PG-M20S)	AD	33	DUNTKB065DE01	J	Formatter Unit (PG-M20X)	CP
2-2-4	HiNDPA114WJSA	J	Heat Caution Label (PG-M20X)	AD	33	DUNTKB065DE03	J	Formatter Unit (PG-M20S)	—
2-2-5	Not Available	—	Kensington Security Standard Connector	—	34	DUNTKB066DE01	—	Input Unit (PG-M20X)	—
2-2-6	LHLDZ2193CEK0	J	Holder	AD	34	DUNTKB066DE01	—	Input Unit (PG-M20S)	—
2-2-7	Not Available	—	Insert Nut, x3	—	35	DUNTKB067DE01	—	Operation Unit (PG-M20X)	—
2-2-8	Not Available	—	Insert Nut, x4	—	35	DUNTKB067DE01	—	Operation Unit (PG-M20S)	—
2-2-9	PSLDHA008WJK0	J	Heak Sink Spacer	AD	36	CPCI-0057CE01	J	PC I/F Unit (PG-M20X)	CW
2-2-10	PSPAT0013CEZZ	J	Tape, x7	AC	36	CPCI-0057CE31	J	PC I/F Unit (PG-M20S)	—
2-2-11	PZETK0146CEKZ	J	Cover	AK	37	RDENCA004WJZZ	—	PFC Unit (PG-M20X)	—
2-2-12	Not Available	—	Earth Angle	—	37	RDENCA004WJN1	—	PFC Unit (PG-M20S)	—
2-3	DCOVA2092CE01	J	Exhaust Cover Ass'y	AQ	38	RDENCA005WJZZ	J	Ballast Unit	BZ
2-3-1	Not Available	—	Exhaust Cover	—	39	RDENCA010WJZZ	—	Power Unit	—
2-3-2	Not Available	—	Spacer, Heat Shielding	—	40	PSLDCA002WJZZ	J	Noise Shield	AN
2-3-3	Not Available	—	Exhaust Cover	—	41	XBSBN26P06000	J	Screw	AA
2-4	GLEGP1034CESA	J	Leg, Right	AM	42	XBSD26P06JS0	J	Screw	AA
2-5	GLEGP3034CESA	J	Leg, Left	AM	43	XBSD30P08KS0	J	Screw	AA
2-6	PSPAT0013CEZZ	J	Tape	AC	44	XBSD30P12JS0	J	Screw	AA
2-7	QCNW-A317WJZZ	J	Leaf SW	AF	45	XBPSF30P06000	J	Screw	AA
2-8	XEBSD26P08000	J	Screw, x1	AA	46	XEBSD26P08000	J	Screw	AA
2-9	XEBSN26P08000	J	Screw, x2	AA	47	XEBSN26P08000	J	Screw	AA
3	Not Available	—	Terminal Cover Unit	—	48	XEBSN30P06000	J	Screw	AA
3-1	DCOVA2091CE01	J	Terminal Cover Ass'y	AT	49	XEPSD26P09WS0	J	Screw	AB
3-3	HiNDP5954CESA	J	Indication Label	AD	50	XEPSF26P06000	J	Screw	AA
4	CHLDZ2191CE01	J	Ballast Unit Holder Ass'y	AM	51	XEPSF30P25XS0	J	Screw	AB
4-1	Not Available	—	Ballast Unit Holder	—	52	UBNDT0013CEZZ	J	Lens Cap Strap	AF
4-2	PSPAT0013CEZZ	J	Tape, x2	AC	53	LHLDZ0140CEKZ	J	Outer Flame	AE
5	CHLDZ2200CE01	J	Fan Holder Ass'y	AK	54	CHLDZ0141CE01	J	Backer Plate Ass'y (PG-M20XE)	AV
5-1	Not Available	—	Fan Holder	—	55	PRDARA042WJFW	J	Heat Sink	—
5-2	PMLT-A007WJZZ	J	Spacer, x5	AB	56	XBSD30P08KS0	J	Screw, x2	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
CABINET AND MECHANICAL PARTS (Continued)									
64	PCOVNA002WJK0	J	Exhaust Guide Plate	AE	6	CCHSK0106CE01	J	Optics Engine Ass'y (PG-M20X)	DK
65	RDMMDPA002WJZZ	J	DMD Unit (PG-M20X)		6	CCHSKA004WJ01	J	Optics Engine Ass'y (PG-M20S)	
65	RDMMDPA003WJZZ	J	DMD Unit (PG-M20S)		6-1	95U10A1018602	J	Optics Engine Unit	
66	QSOCZA015WJZZ	J	C-spring (PG-M20X)	BK	6-1-1	<i>Not Available</i>	—	Optics Engine	—
66	QSOCZA038WJZZ	J	C-spring (PG-M20S)		6-1-2	RMOTBA001WJZZ	J	Color Wheel	
67	QCNW-A522WJZZ	J	Thermistor	AF	6-1-3	95U41B1018017	J	Color Wheel Fixing Angle	
68	XEBSD26P10000	J	Screw, x6	AA	6-1-4	95U110M200353M	J	Screw, x3	
69	PSPAZA099WJZZ	J	Spacer for Cooling Fan		6-1-5	XBBSF26P05000	J	Screw, x3	AA
					6-1-6	95U11B1018812	J	Color Wheel Fixing Cover	
					6-1-7	95U49B1019446	J	Heat Shielding Plate	
					6-1-8	95U12B1018810	J	Lamp Box	
					6-1-9	95U71B1018838	J	Duct	
					6-1-10	XBPSF30P06000	J	Screw, x1	AA
					6-1-11	95U60B1035321	J	Spacer	
					6-1-12	95U72B1018840	J	Exhaust Punching	
					6-1-13	95U72B1019698	J	Exhaust Punching	
					6-1-14	NFANR0140CEZZ	J	Cooling Fan(Front)	
					6-1-15	NFANR0139CEZZ	J	Cooling Fan(rear)	
					6-1-16	95U60B1035437	J	Partition Plate	
					6-1-17	95U55B1035320	J	Oscillation Prevent Rubber, x6	
					6-1-18	95U53B1019321	J	Screw, x6	
					6-1-19	95U187B1019601	J	Tape	
					6-1-20	95U72B1018837	J	Shield(Top)	
					6-1-21	95U110A1018253	J	Sensor Unit Ass'y	
					6-1-22	95U53K108340	J	Screw	
					6-1-23	NFANSA001WJZZ	J	Blow Fan	
					6-1-24	95U41B1019319	J	Lamp Fixing Plate	
					6-1-25	95U71B1019323	J	Lamp Cooling Duct(Upper)	
					6-1-26	95U71B1019327	J	Lamp Cooling Duct(Lower)	
					6-1-27	XBBSF26P05000	J	Screw, x2	AA
					6-1-28	95U110M302000N	J	Screw, x2	
					6-1-29	95U55B994086	J	Oscillation Prevent Washer, x2	
					6-1-30	XBPSF30P06000	J	Screw, x1	AA
					6-1-31	95U39B1035436	J	Exhaust Guide Plate	
					6-1-32	95U187B1035323	J	Tape	
					6-1-33	95U27B1018652	J	DMD Aperture	
					6-1-34	95U60B1018653	J	DMD Sealing Sapcer	
					6-1-35	XBPSD30P06J00	J	Screw, x2	AA
					6-1-36	XBBSF26P05000	J	Screw, x1	AA
					6-1-37	95U187B1035566	J	Tape	
					6-2	PLNS-0243CEZZ	J	Projection Lens	CE
					6-3	CLMPFA001CE01	J	Lamp Case Ass'y	
					6-4	95U280M30107K	J	Screw, x4	

OPTICS MECHANISM PARTS



Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
SUPPLIED ACCESSORIES									
▲	CCAPHA001WJ01	J	Lens Cap	AH		SPAKAA015WJZZ	—	Partation Board	—
	GCASN0005CESA	J	Carrying Bag	BC		SPAKC5669CEZZ	—	Packing Case (PG-M20X)	—
	GCOVD0103CESA	J	Terminal Cover	AK		SPAKCA165WJZZ	—	Packing Case (PG-M20S)	—
▲	QACCB5024CENA	J	Power Cord (PG-M20X) (for U.K.,Hong Kong and Singapore)	AZ		SPAKF0552CEZZ	—	Sleeve	—
▲	QACCBA012WJPZ	J	Power Cord (PG-M20SA) (for U.K.,Hong Kong and Singapore)			SPAKPA016WJZZ	—	Polystyrene Cover	—
▲	QACCDA007WJPZ	J	Power Cord(for U.S., Canada)	AR		SPAKX2992CEZZ	—	Buffer Material	—
▲	QACCL3022CEZZ	J	Power Cord(for Australia, New Zealand and Oceania)	AZ		SSAKA0170CEZZ	—	Polystyrene Cover, for Accessories	—
▲	QACCV4002CEZZ	J	Power Cord(for Europe)	AZ		TLABK0001TAZZ	—	Carton Label	—
	QCNWG0001WJPZ	J	USB Cable	AL					
	QCNWGA010WJZZ	J	DVI to 15-pin D-sub Cable	AU					
	RRMCGA013WJSA	J	Remote Control	AW					
	TCADE3018CEZZ	J	Questionnaire Card (PG-M20X)	AF					
	TCADEA013WJZZ	J	Questionnaire Card (PG-M20S)						
	TGAN-1710CEZZ	J	Guarantee Card(for U.S.) (PG-M20X)						
	TGAN-A018WJZZ	J	Guarantee Card(for U.S.)			QCNW-A294WJZZ	J	Extension Cable 80-pin INPUT-PC I/F	
	TGAN-A019WJZZ	J	Guarantee Card(for Canada)			QCNW-A295WJZZ	J	Extension Cable 13-pin PFC-INPUT	
	TGAN-A020WJZZ	J	Guarantee Card(for Canada)			QCNW-A296WJZZ	J	Extension Cable 32-pin INPUT-KEY	
	TGAN-A037WJZZ	J	Guarantee Card(for U.S.) (PG-M20S)			QCNW-A297WJZZ	J	Extension Cable 30-pin INPUT-FORMATTER	
	TGANE0050TAZZ	J	Guarantee Card (PG-M20XX, PG-M20SK)	AE		QCNW-A298WJZZ	J	Extension Cable 80-pin FORMATTER-PC I/F	
	TiNS-7609CEZZ	J	Operation Manual (PG-M20X)	AQ		QCNW-A521WJZZ	J	Extension Cable 20-pin INPUT-Gyro	
	TiNS-7610CEZZ	J	Quick Reference Guides	AG					
	TiNS-7612CEZZ	J	Quick Reference Guides (for Europe) (PG-M20X)	AG					
	TiNS-7614CEZZ	J	Quick Reference Guides (for Europe) (PG-M20X)	AG					
	TiNS-A209WJZZ	J	Operation Manual (PG-M20S)						
	TiNS-A210WJZZ	J	Quick Reference Guides (PG-M20S)						
	TiNS-A211WJZZ	J	Quick Reference Guides (PG-M20SE)						
	TiNS-A212WJZZ	J	Quick Reference Guides (PG-M20SE/SK)						
	UBNDT0013CEZZ	J	Lens Cap Strap	AF					
	UDSKA0058CEN1	J	CD-ROM (PG-M20X)	AM					
	UDSKAA009WJZZ	J	CD-ROM (PG-M20S)						

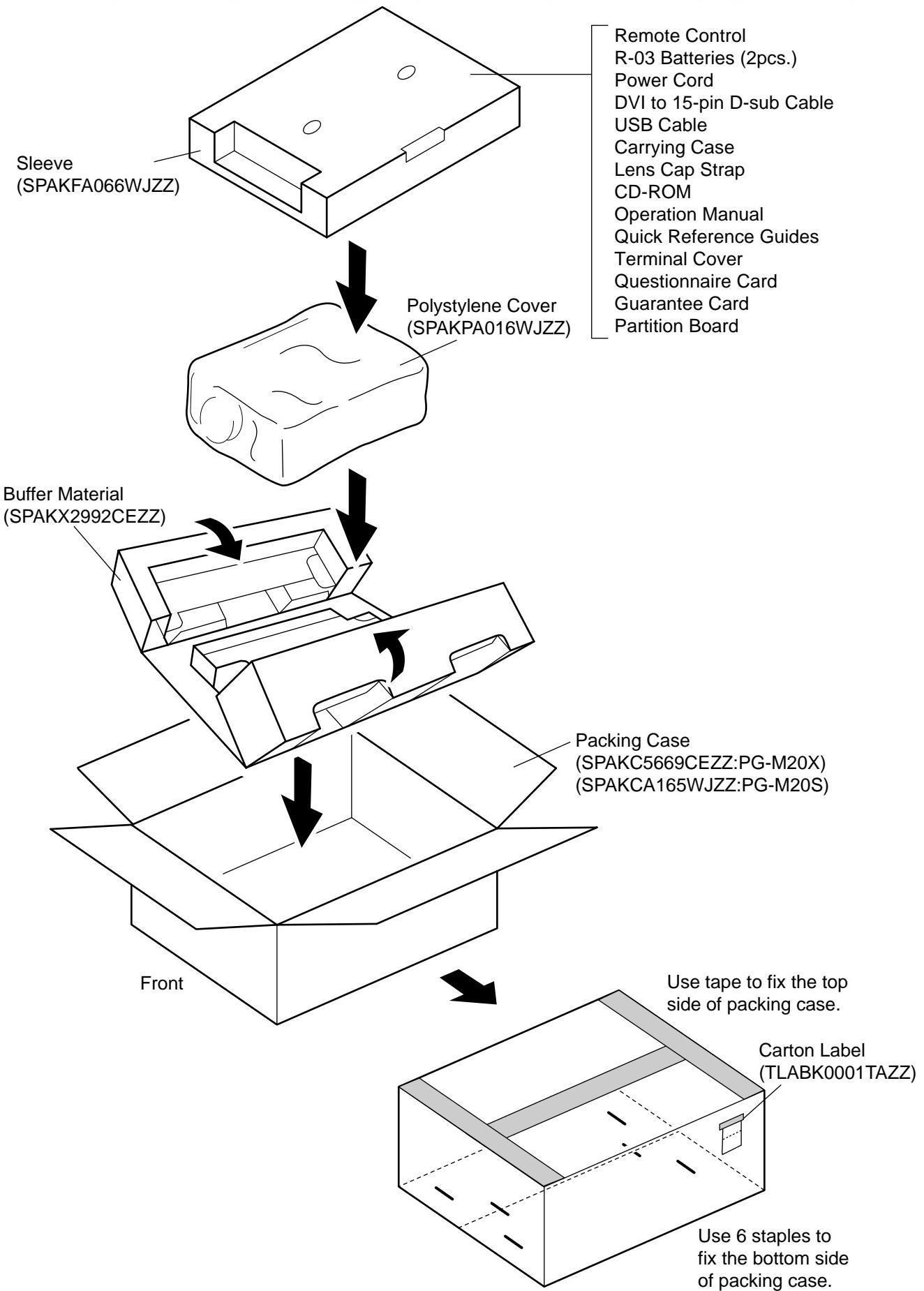
**PACKING PARTS
(NOT REPLACEMENT ITEM)**

SPAKAA015WJZZ	—	Partation Board	—
SPAKC5669CEZZ	—	Packing Case (PG-M20X)	—
SPAKCA165WJZZ	—	Packing Case (PG-M20S)	—
SPAKF0552CEZZ	—	Sleeve	—
SPAKPA016WJZZ	—	Polystyrene Cover	—
SPAKX2992CEZZ	—	Buffer Material	—
SSAKA0170CEZZ	—	Polystyrene Cover, for Accessories	—
TLABK0001TAZZ	—	Carton Label	—

**SERVICE JIGS
(Use for servicing)**

QCNW-A294WJZZ	J	Extension Cable 80-pin INPUT-PC I/F
QCNW-A295WJZZ	J	Extension Cable 13-pin PFC-INPUT
QCNW-A296WJZZ	J	Extension Cable 32-pin INPUT-KEY
QCNW-A297WJZZ	J	Extension Cable 30-pin INPUT-FORMATTER
QCNW-A298WJZZ	J	Extension Cable 80-pin FORMATTER-PC I/F
QCNW-A521WJZZ	J	Extension Cable 20-pin INPUT-Gyro

PACKING OF THE SET/VERPACKEN DES GERÄTS



PARTS LIST

PARTS REPLACEMENT

Parts marked with "▲" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

Les pieces marquées "▲" sont importantes pour maintenir la sécurité de l'appareil. Ne remplacer ces pieces que par des pieces dont le numéro est spécifié pour maintenir la sécurité et protéger le bon fonctionnement de l'appareil.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

- | | |
|-----------------|----------------|
| 1. MODEL NUMBER | 2. REF. NO. |
| 3. PART NO. | 4. DESCRIPTION |
| 5. CODE | 6. QUANTITY |

in USA: Contact your nearest SHARP Parts Distributor.
For location of SHARP Parts Distributor,
Please call Toll-Free; 1-800-BE-SHARP

in CANADA: Contact SHARP Electronics of Canada Limited
Phone (416) 890-2100.

★ MARK: SPARE PARTS-DELIVERY SECTION

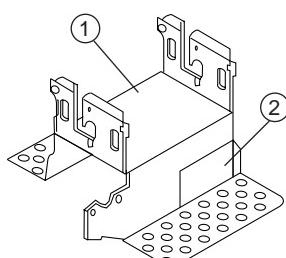
Ref. No.	Part No.	★	Description	Code
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AN-60KT

1	9AQAN-60KT-01	J	Installation Adapter
2	9AQAN-60KT-02	J	Model Label

SUPPLIED ACCESSORIES

3	9AQAN-Z7T-13	J	Screw M3x10	AM
4	9AQAN-NV4T-15	J	Screw M4x12	
	9AQAN-60KT-03	J	Operation Manual	
	9AQAN-15AG2-08	J	Polystyrene Bag	AN
	9AQAN-NV4T-16	J	Polystyrene Bag	AM



AN-60KT

ERSATZTEILLISTE

AUSTAUSCH VON TEILEN

Ersatzteile, die besondere Sicherheitseigenschaften haben, sind in dieser Anleitung markiert. Elektrische Komponenten mit solchen Eigenschaften sind in den Ersatzteil durch "▲" gekennzeichnet. Der Gebrauch von Ersatzteilen, die nicht dieselben Sicherheits-eigenschaften haben wie die vom Hersteller empfohlenen und in der Bedienungsanleitung angegebenen, können zur Ursache von Blitzschlägen, Bränden und anderen Gefahren werden.

"WIE MAN ERSATZTEILE BESTELLT"

Damit Ihre Bestellung prompt und korrekt ausgeführt wird, geben Sie bitte folgende Informationen.

- | | |
|-------------------|-----------------|
| 1. MODELL NR. | 2. REF. NR. |
| 3. ERSATZTEIL NR. | 4. BESCHREIBUNG |
| 5. KODE | 6. QUANTITÄT |

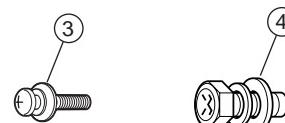
★ MARKIERUNG : ERSATZTEILE-LIEFERUNG

Ref. No.	Part No.	★	Description	Code
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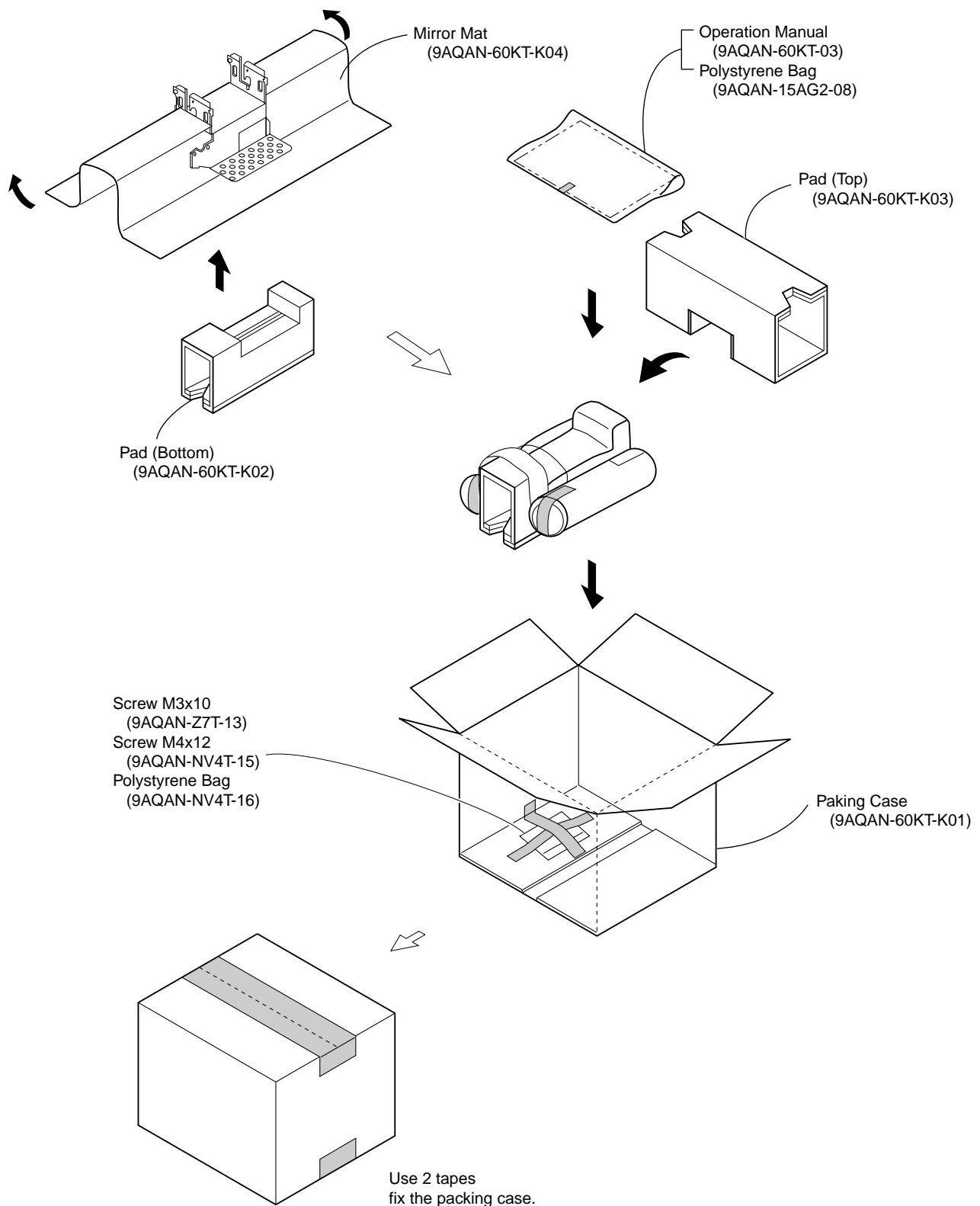
PACKING PARTS (NOT REPLACEMENT ITEM)

9AQAN-60KT-K01	–	Packing Case	—
9AQAN-60KT-K02	–	Pad (Bottom)	—
9AQAN-60KT-K03	–	Pad (Top)	—
9AQAN-60KT-K04	–	Mirror Mat	—

ACCESSORIES



PACKING OF THE SET/VERPACKEN DES GERÄTS



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